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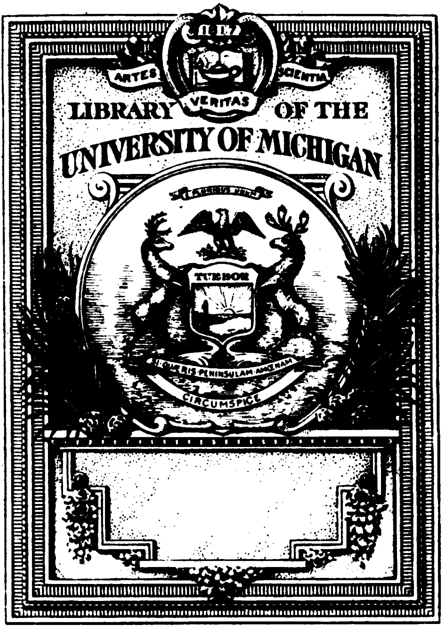
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AN INTRODUCTION
TO
COMPARATIVE PHILOLOGY
FOR CLASSICAL STUDENTS

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AN INTRODUCTION
TO
COMPARATIVE PHILOLOGY

FOR CLASSICAL STUDENTS

BY

J. M. EDMONDS, M.A.,
LATE SCHOLAR OF JESUS COLLEGE, CAMBRIDGE,
ASSISTANT MASTER AT REPTON SCHOOL

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R l.

PREFACE.

IN preparing pupils for Classical Scholarships I had long felt the want of a book on Comparative Philology adapted to their attainments, and now in compiling this little Introduction I have tried to supply it. In aiming at simplicity I have felt bound sometimes to sacrifice completeness and omit details; but I hope that what I have said will be found correct as far as it goes. The theory of the Long 'Sonants' I have left alone. I have given more space to the Consonants than to the Vowels. English, especially the History of English, I have treated with some neglect. When it is remembered that the ordinary Sixth-Form boy knows little of Phonetics and nothing of Old English, the reason of these and other inconsistencies will, I hope, be clear. In smaller matters, such as the division of words by hyphens and the marking of quantities, I have sacrificed consistency to clearness. In the case of forms only presumed to have existed, I have omitted to denote this by an asterisk, and have preferred, for instance, *μέμn̥μεν* to **mémn̥men* as the supposed original of *μέμαμεν*. Confusion with English spelling I have tried to avoid by enclosing phonetic spelling, where necessary, in round brackets, and by various expedients such as printing t^h, p^h for the usual *th, ph,* and using *w* and *y* for *u̯* and *i̯*. Readers acquainted with the alphabet

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of the *Association phonétique internationale* will find some of my phonetic symbols unfamiliar. But I felt that, in the present state of the teaching of Phonetics, to adopt that system would necessitate the multiplication of symbols needing explanation to the majority of Classical students; and in an elementary work of this kind the fewer strange things the better.

The books I have laid chiefly under contribution are those mentioned on page 201, but I am also indebted to the writers of various articles in the *Encyclopaedia Britannica.* Special thanks are due to Mr E. Abbott of Jesus College for his great kindness in reading the whole book in manuscript; to Mr H. J. Cape of the King's School, Canterbury, for reading part of the proofs; to Mr L. A. Burd of Repton for advice on several points; and to Mr Giles for permission to use an illustration from his article on Writing in the *Encyclopaedia Britannica.* I may add that the drawings for the diagrams are nearly all the work of my wife.

J. M. E.

REPTON,
September, 1906.

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Note: *Inverted commas* denote meanings: thus, 'fire.'
Italics denote ordinary spelling: thus, *fire.*
Round brackets denote, where necessary, phonetic spelling: thus, (fɐi̯ə).

Errata: p. 80; 'About this time *j* began to be differentiated,' etc.: *transpose* this sentence to 4th line from bottom.

p. 118, line 16; *Wycombe* would seem to be unhappily chosen; according to Shore, *Origin of the Anglo-Saxon Race*, p. 266, it is a modern misspelling of *Wicham* or *Wickham.*

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Note: Nos. 2, 3 & 4 are adapted from Rippmann's *Elements of Phonetics.*

No. 5 is from the *Companion to Greek Studies.*

No. 8 is from the *Encyclopaedia Britannica*, Supplementary Volumes, under 'Writing.'

CHAPTER I.

LANGUAGE AND THE STUDY OF LANGUAGE.

Introductory—Acquiring our own language—Acquiring a foreign language—Province of Comparative Philology—Change—*Elements of Language*—Speech—Gesture—Feature—Tone of Voice—Pitch—Emphasis or Stress—Speed—*Origin of Speech*—Imitation of Animals—Interjections—Symbolism—Metaphor—*Differentiation in Language*—*Classification of Languages by Form*—Isolating—Agglutinative—Inflexional—Incorporating—Position of English—of French—of German—of Greek and Latin.

THE facts we learn in acquiring a language may be grouped under four heads:

(1) Vocabulary, or words pure and simple,

(2) Accidence, or the inflexions of nouns, verbs, etc.,

(3) Syntax, or the arrangement of words in sentences,

(4) Spelling, or the relation of the written to the spoken language.

Acquiring our own anguage.

A child acquiring his native language learns these facts as a mass of associations. By imitating others he associates the sound-group *grass* with the thing 'grass,' and the sound-group *ree* with the thing 'tree'; the thing 'grass' and the thing tree' he associates together by means of a common characteristic, 'greenness,' that is, he acquires the abstract notion 'green,' and with this by imitation he associates the sound-group *green.* Simultaneously with the vocabulary, and in a similar way, he acquires the accidence and the syntax. The spelling-associations are acquired somewhat later.

Acquiring a foreign language.

When we learn a foreign language we acquire a new set of associations. With the thing 'grass' we learn to associate the sound-group *herbe* as well as the sound-group *grass,* and with the notion 'green' we learn to associate the sound-group *vert* as well as the sound-group *green.* That is to say, we start with the mass of associations of which our native language consists, and gradually extend them in a new direction. The new associations we group mentally under the heading 'French,' and the process of acquiring associations becomes a comparison between English and French. We learn to write down the symbol-group 'herbe' to represent the sound-group *herbe,* and not to write 'airb' as we should if the sound-group belonged to the heading 'English[1].' We go through the same process with every new sound-group, and we gradually acquire a mass of associations such as *man* = *homme, is* = *est.* By a similar process we learn the inflexions *homme—hommes, est—sont,* and the sentences *l'homme est bon, les hommes sont bons.*

When we proceed to learn other foreign languages we begin to acquire fresh masses of associations, e.g. *man* = *Mann, man* = *homo, man* = *ἀνήρ, man* = *homme.* But we do not directly associate *Mann* with *homo,* or *ἀνήρ* with *homme.* For instance, we should find it difficult to translate a piece of German into French without first turning the German mentally into English. It is here that the province of Comparative Philology begins. It takes such groups as *man—homme—Mann—homo—ἀνήρ* and *he loves—il aime—er liebt—amat—ἐρᾷ*, and compares the members of each group. In short, Comparative Philology (or, as it is sometimes called, Philology) deals with the phenomena of Language as Natural Science deals with the phenomena of Matter, i.e. it compares various phenomena, groups them under heads according to their common characteristics, and deduces the laws or principles which govern them. It is the business of Comparative Philology to answer as far as possible such questions as Why does the Frenchman say *il aime* where the Englishman says *he loves?* Has the Englishman always said *he loves?* If not, why not?

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[1] In school teaching in England this order is frequently reversed, the spelling or look of a word being learnt before the pronunciation or sound.

Province of Comparative Philology.

Change.

The Englishman has not always said *he loves.* In the time of King Alfred (849—901) he said *he lufath* (spelt 'lufaþ'). Similarly the French *il aime* was once the Latin *ille amat.* Thus we see that anguage changes; in other words, if an Englishman of the time of Alfred were to come to life again he would have at least as great difficulty in understanding one of us as a Cockney has in understanding a Scotchman.

Before we deal with Change and its causes there are several points to be discussed. First, as to the Elements of Language.

Elements of Language.
1) Speech.

Language is composed primarily of speech-sounds—vowels and consonants—formed by the organs of the throat and mouth (see Chapter II.); but it has many other elements. The phrase 'gesticulating foreigner' implies that foreigners when speaking employ Gesture, but that we do not. It is true that gesture is less common

2) Gesture.

in English than in most other languages. We rarely shrug our shoulders or extend our hands while speaking. In church or in school, however, when we wish to avoid speaking, we can readily make known any simple want or intention in this way. Among some races, especially the lower races, gesture is far more widely employed, and in many cases enters directly into the spoken language. In Modern Greek *οὐχί*, 'no,' has degenerated into a mere parting of the lips accompanied by a tossing back of the head (the Classical *ἀνανεύειν*). In the Grebo language of West Africa *ni ne* means 'I do it' or 'you do it' according to the gesture of the speaker. Indeed, our own system of counting by tens—*twenty*, *thirty*, *forty*—proves that our linguistic ancestors indicated numbers by their fingers as savages do to this day. Under certain circumstances elaborate gesture-systems have been developed entirely independent of speech. Among the North American Indians, owing to the great variety of languages, a common gesture-system is often employed, with which conversation can be carried on. Deaf-mutes have been known to develop a language of the same kind. We may note here that an Englishman who never employs gesture while speaking at home, on going abroad resorts to it frequently. This is partly, no doubt, owing to unconscious imitation of the inhabitants, but largely, too, because he feels that his imperfect pronunciation of the language requires help.

(3) Feature.

Another element of language is Expression of Feature. Just as we have learnt to associate a certain emotion with the noise we call laughing, so certain emotions such as pride, disgust, humility, shame, anger, have come to be connected with certain expressions of face, and thus an angry word is always accompanied by an angry look. This association of the expression of face h speech is so deeply rooted that in the dark we ıgine it accompanying the spoken word. In this we are of course guided by the Tone of Voice, which we may call the fourth element in language. Even without the help of the al expression it is not hard to distinguish a sarcastic gh from a merry one. Our colloquial 'Irishism,' 'Don't ꜱ at me in that tone of voice,' acknowledges the se connexion between tone and feature. Indeed, it is uncommon among intimates to express interest, in- rogation, surprise, etc., by tone alone, i.e. by voice- rmur with the closed lips. Such symbol-groups as m,' 'humph,' are intended to express this on paper. ıen we talk of 'speaking kindly' to a dog, we know it is tone of voice rather than the words which he under- nds. For this reason many men when calling a small mal will speak in falsetto.

Tone of
e.

Other elements of language are Musical Pitch, Emphasis or Stress, and Speed of Utterance. These are exemplified in such phrases as '*Ever* so far away,' 'I can't *tell* you how much I en- ed it,' 'Then with a *terrific roar* the whole vessel was wn into the air.' In the last instance the noise and ror of the explosion, as well as the climax of the story, indicated by the emphasis, the high pitch, and the wness of utterance, of the two words in italics. In a tence like 'I can't walk there,' the emphasis may be ced on any one of the four syllables with a different aning in each case. The importance of these latter ments of speech is seen.in reading aloud. To produce full effect intended by the writer of the book the der must guess the tone and speed of every sentence and pitch and emphasis of every syllable; for this is more n the most scientifically accurate alphabet could convey.

Pitch.
Emphasis.
Speed.

These subsidiary elements of language—Gesture, Expression of Feature, Tone of Voice, Pitch, Emphasis, and Speed of Utterance—occupy an important place in the languages of modern savages, and doubtless did so in the early stages of the languages of civilisation. The more highly-developed a language becomes, that is, the more perfect a vehicle of thought, the less reliance it places on these subsidiary elements. As we saw above, speech begins in the infant with associations, first, between sounds and things ('trees,' 'grass'), secondly, between sounds and notions or ideas ('green'). It is probable that it originated in the first instance in a similar way. The infant imitates its parents and others. What did the first speaker imitate? How did the association between the original sound-groups and the things they expressed come into existence?

Origin of Speech.

Doubtless many of the first words were Imitations of the cries of animals such as *moo*, *baa*, uttered either for amusement, as children utter them now, or for purposes of decoying. Then the sound-group *moo* would be used to modify a gesture, such as that of pointing, to explain what kind of animal was pointed at. The stage of using a sound-group to modify a gesture or expression of the face was probably a long one, but a time must have come when a savage wished to express 'there is an ox' in the dark, where gesture and expression of face would be useless; and thus *moo* alone would be employed as a sentence-word with this meaning.

Imitation of animals.

At a very early period in his history[1] man could doubtless express his feelings in a limited way by various Interjections, just as a dog

Interjections.

---

[1] The earliest stages of the growth of Language were probably contemporary with the 'monkey stage' of human development.

can either bark or growl, and a hen either cackle or cluck, according to circumstances. Thus *ugh*, accompanied by suitable pointing-gestures, might mean 'I have the toothache,' or 'he has sprained his ankle.' After a long use of these primitive methods of communication, the savage, we may suppose, began to combine such a sound-group as *moo* with such a sound-group as *ugh*. 'There-is-an-ox there-is-pain' would be the result. Accompanied by suitable gestures this could mean 'I am going to stab that ox with this spear,' or 'Let us come and stab that ox with our spears,' or even 'They have killed this ox with their spears.' Once such combinations had become possible, sentence-words such as *moo* ('there-is-an-ox') and *ugh* ('there-is-pain') would gradually develop into true words, the one meaning 'ox' and the other 'stab' or 'kill.' These could be used in various combinations.

Symbolism.

Another likely origin of words is Symbolism, such as the act of sucking-in the breath between the upper teeth and the lower lip to denote either drinking or sweetness to the taste. The Latin *bibere* may be *originally* a 'baby-word' of this kind. To this day we often denote the idea 'delicious' in this way. We may note here the symbolism seen in Vowel-Contrast. For instance, the Javanese say *iki* for 'this,' *ika* for 'that (near),' and *iku* for 'that (yonder),' and even the Greeks, when they wished to emphasise the nearness of a thing, changed τόδε to τοδί. In both cases degrees of distance are indicated by variety of vowels. The same thing is used to indicate sex. Thus in Finnish *ukko* is an old man, *akka* an old woman; indeed, such a phenomenon as *bonum*—*bonam* may be referred historically to the same principle[1].

---

[1] For the connexion between Vowel Gradation and Musical Pitch see Chapter VII.

It should be borne in mind in discussing the probable origin of speech that, to become the fixed expression of any particular idea, a word would have to be employed constantly by a number of persons to one another and to stand tests such as ease of pronunciation (organic) and distinctiveness (acoustic). It was a case of the survival of the fittest.

Metaphor.

We have still to discuss a most important element in the formation of speech,—Metaphor. This is an obvious way of expressing the hitherto unknown in terms of the known. When the native Australians first became acquainted with books they called them *mūyūm*, 'mussels,' because they open and shut in a similar way. The Basuto word for a fly, *ntsi-ntsi*, which is obviously imitative of buzzing[1], has been extended by metaphor to mean a courtier, i.e. one who buzzes round his chief. The history of three words for tobacco-pipe, *chibouk*, *calumet*, and our *pipe*, points to a similar origin. *Chibouk* comes from Central Asia, where it meant originally a herdsman's flute. *Calumet* in the dialect of Normandy (from Latin *calamus*) is the name for a shepherd's pipe, and was applied to the smoking-instrument of the Red Indians by the early colonists of Canada. Our *pipe* was once used with the same meaning. In the translation of the Psalms we read 'Praise him upon the strings and pipe.' We still speak of the pipes of an organ. A similar extension of association by metaphor gave us such words as *drain-pipe, wind-pipe.* The history of the word *junketing* is a case in point. From the Latin *iuncus*, 'a reed,' came Late Latin *iuncata*, 'cheese made in a reed-basket,' which in Italian appears as *giuncata*, 'cream-cheese,' and in French as *joncade*, 'curds-and-whey,' whence we have the English *junket*; from the *junketing*-parties where this delicacy was eaten we get the noun *junketing* meaning 'merry-making.' To take another instance, *peculiar* comes through French from the Latin *peculiaris*, originally the adjective of *peculium*, a slave's private hoard; this again is a diminutive of *pecunia*, 'money,' once 'property' of any kind, earlier 'live-stock' from *pecus*, 'cattle'; in Sanskrit[1] *paçu* means 'cattle,' and is formed from *paç*, 'to fasten up' (Latin *pango*, Greek πήγνυμι), the original meaning being doubtless 'domestic' as opposed to 'wild' cattle. If we wonder at the fewness of such self-expressive words as *cuckoo*, *buzz*, *hiss*, *pompom* in a language like our own, compared with the enormous number of such words as *go*, *black*, *man*, *never*, whose meaning is merely traditional, we have only to consider such extensions of meaning as these.

---

[1] Cf. Mod. Greek *τσίτσικος*, a cricket.

Differentiation in Language.

We have indicated briefly the Elements of Language (in the widest sense), and the probable Origin and Development of Speech (or Language in the narrow sense). We shall now discuss the causes of Differentiation in Language, i.e. the splitting up into dialects. These causes are mainly local.

Let us imagine a small village-community where, roughly speaking, everyone spoke to everyone else every day. So long as the conditions remained the same, the necessities of mutual intelligibility would preserve the language of the villagers from change, or if it did change the changes would, in the long run, be common to all the inhabitants. But suppose, under pressure of increasing population, decreasing fertility of the soil, or catastrophes such as floods and landslips, the community spread further and further, till natural boundaries such as rivers and mountains divided the speakers of the original language into new and distinct communities. Not only might names have to be found for new objects, but changes in the forms and uses of words (owing, e.g., to laziness or to defective imitation in infants) would not necessarily, under different circumstances, follow the same lines. Between some of the villages communication, in varying degrees, might be kept up. The divergence in dialect would probably be inversely proportional to the ease of inter-communication. Thus, if we call the original village A and its successive offshoots *in any one direction* B, C, and D, the chances of remaining mutually intelligible would be greater in the case of A and B than in the case of A and C or of A and D. Similarly the dialects of C and D would have more elements in common than those of B and D. B and C might have the same *number* of elements in common as C and D, but these would not necessarily be *the same* elements. If owing to any cause B or C moved from their intermediate position, the chances of A and D becoming mutually unintelligible would be greatly increased.

---

[1] For the connexion between Latin and Sanskrit see Chapter v.

We have imagined our community as already so far advanced in civilisation as to dwell for long periods in one district. It will be understood that in the case of nomad or wandering peoples the circumstances would be still more favourable to differentiation.

(The causes of Change in language are discussed more fully in Chapter VI.)

Classification of Languages according to Form.

The languages of the world may be classified in many ways, e.g. living and dead, written and unwritten; they may be classified according to their descent, or according to their form.

According to their Form languages may be classified under three heads:

(1) Isolating (also called Radical and Monosyllabic),

(2) Agglutinative,

(3) Inflexional.

(1) Isolating.

In Isolating languages, such as Chinese, there is no inflexion (e.g. *amo—amas*, *man—men*). A word never undergoes modification, but grammatical relations such as object and subject are expressed partly by the order of the words (as in English *Tom hit Jack* contrasted with *Jack hit Tom*), partly by the use of particles. Such languages make a large use of Tone in distinguishing words otherwise identical (see Chapter III.).

(2) Agglutinative.

Agglutinative languages, such as Turkish, stand halfway between Isolating languages on the one side and Inflexional languages on the other. They express grammatical relations by prefix or suffix; but the sounds so employed are always clearly distinguishable from the word they qualify. In an Agglutinative language all words are modified as the English *care*, *believe*, in *care-less-ness*, *un-believ-able*, where *-less*, *-ness*, *un-*, *-able*, though without meaning when they stand alone[1], are all clearly distinguishable. In such languages words can be separated from their modifying syllables and yet remain intact—'word' and 'stem' are in them interchangeable terms.

(3) Inflexional.

In Inflexional languages, such as the languages with which in this book we are chiefly concerned, the stem is a mere abstraction, existing perhaps in the mind of the speaker but never used in actual speaking[1], while the prefixes and suffixes have a far less distinct meaning than in Agglutinative languages. Thus in the Latin *hominis -is* gives the meaning 'of,' and in *homines -es* gives the meaning 'more than one,' but 'of men' is not expressed by *homin-es-is* or *homin-is-es,* as it would be in an Agglutinative language. Moreover in languages of this class stems are modified internally, as *man—men, πείθειν—πιθεῖν.*

---

[1] I.e. we cannot, under any circumstances we like, use *less* to mean 'without,' or *un* to mean 'not.'

(4) Incorporating.

To these three great classes a fourth may be added known as Incorporating. Such languages are really an extreme type of the Inflexional class. In the Basque language of the Pyrenees inflexions are provided for all possible combinations of pronouns with verbs, e.g. 'I-go-to-him,' 'Let-them-bring-her-to-us.'

It will be seen that each of these classes shades off into the next. Between Agglutinative and Inflexional, particularly, it is hard to draw the line. It is probable that to some extent these classes mark stages of development, and that all Inflexional languages must once have been Isolating and have passed through an Agglutinative stage.

Position of English.

The question, to which class does English belong? is not easy to answer. By descent it is Inflexional. Old English (or Anglo-Saxon) has as elaborate systems of declension as Greek or Latin. In Modern English, however, the prepositions *of, to, by,* etc., have almost entirely taken the place of case-suffixes, and what Latin expresses by tense-suffixes and person-suffixes we express by auxiliaries and pronouns (e.g. *illis, to them*; *amabo, I will love*). Our inflexion is practically confined to the following:

---

[1] Strictly, this could be said only of languages *entirely* inflexional; in Greek, λόγε the vocative and λέγε the imperative are stems without suffix or other modification.

In nouns:
- the *-s* of the plural (*cats*),
- the *-s* of the possessive (*cat's, cats'*).

In adjectives:
- the *-er* of the comparative (*high-er*),
- the *-est* of the superlative (*high-est*).

In verbs:
- the auxiliaries (*am, are*; *have, has*),
- the 'strong' verbs (*sing, sang, sung*),
- the past tense and participle (*stay, stay-ed*),
- the present participle and verbal (*go, go-ing*),
- the third person singular of the present tense (*love, love-s*).

Now though the prepositions *of, to, by,* etc., are *written* apart from the word they qualify, in *pronunciation* there is no break. They are virtually prefixes; and as the word they qualify remains unmodified their use has every claim to be considered an Agglutinative element. On the other hand, whole sentences may be composed in English of unmodified words which depend for their meaning on their order alone, e.g. *Dick hit Tom* contrasted with *Tom hit Dick, Hit Dick, Tom,* and *Hit Tom, Dick.* In such sentences English is Isolating. The same principle is seen in such collocations as *The Cambridge University Rugby Union Football Club,* as well as in the compounds *railway, tea-cup, garden-roller, county-council,* with which they are structurally identical[1]. But though the inflexions of English are nowadays few, they still form an essential part of the language. This being so, Modern English may be described as an Inflexional language which has developed both Isolating and Agglutinative characteristics.

---

[1] An interesting example of the tendency of English to become Agglutinative is seen in the *-s* of the possessive. We can now say *With the Bishop and Mrs Smith's best wishes*, where the *'s* belongs to the Bishop as well as to Mrs Smith; and it is quite usual to speak of *the Member for Canterbury's speech,* or even *the man from Birmingham's proposal,* where the suffix *'s* is separated from its noun-stem by a prepositional phrase. Some day we may say *the man that hit me's fist.* This *s* was once as truly an integral part of the noun as the *-is* of the Latin *honoris.*

French.

In French, nouns are less inflected even than in English, but the verbs still show elaborate inflexions (e.g. *aime, aimons, aimez, aimerai, aimasse*).

German.

In German, while the facility with which compounds like *Aufnahmefähigkeit* ('eligibility') are formed, points to agglutination, the noun-inflexions are a marked feature of the language.

Greek and Latin.

Greek and Latin are good types of the Inflexional class, though even in them such phrases as *καταβάλλειν*, *ad oppidum*, show an Agglutinative element, while 'indeclinable' words like *δέκα*, *frugi*, are distinctly Isolating in character.

CHAPTER II.

THE MECHANISM OF SPEECH, AND THE CLASSIFICATION OF SOUNDS.

The Apparatus of Speech—Larynx—Vocal Chords—Glottis—'Indeterminate Vowel'—Pharynx—Epiglottis—Tongue—Soft Palate—Nose—Mouth—Rounding the Lips—Breath, Voice, and Whisper—Examples of Consonants—Vowel and Consonant defined and distinguished—*Classification of Consonants*—(i) by Form—Spirants—Stops—Nasals—Liquids—(ii) by Place—Velars—Palatals—Cerebrals—Alveolars and Dentals—Interdentals—Labiodentals—Labials—Table of Consonants—(i) Breathed—(ii) Voiced—Uvula-Stops—Breathed Nasals and Liquids—*q* and *k*—*Classification of Vowels*—Difference between (*χ*) and (*i*)—Vowel Positions—(i) Vertical—(ii) Horizontal—Rounding—Narrow and Wide—Scheme of Vowels—*Other Sounds*—Nasalised Vowels—'Sonants'—Diphthongs—Triphthongs—Glides—The Aspirate—Aspirated Stops.

In order to understand the laws of Change in language we must have a clear idea, first, of the way in which speech-sounds are produced, and, secondly, of their classification.

We can produce sound either by in-breathing or by ut-breathing; custom and convenience have decided, for urposes of speech, on the use of out-breathing[1]. The course of the breath from the lungs to the lips is as follows. It is driven, by the contraction of the ribs and the diaphragm, up the windpipe (in the front of the neck) to the Larynx or Adam's apple. Here the sound is as it were formed in the rough. The

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[1] We sometimes, however, say *no* by breathing inwards, generally ith a shake of the head.

Larynx.

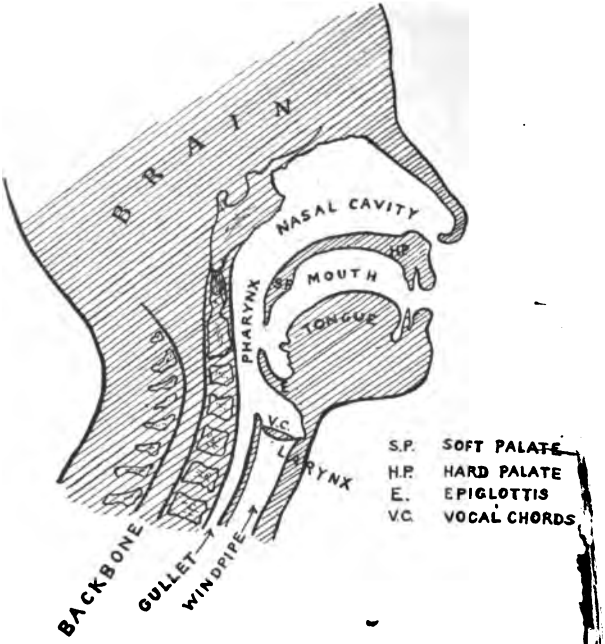

Diagram 1.

Larynx is an oval box of cartilage or gristle, across which are stretched the two Vocal Chords. These are elastic ligaments, roughly semi-circular in shape, which by muscular action can be made to expand

Vocal Chords.

either in length or in width with the following different effects:

(1) They close together entirely as in 'holding the breath,'

(2) They open wide as in ordinary breathing,

(3) They allow the breath to pass through a narrow slit, which causes them to vibrate like the string of a violin and so produce sound,

(4) They lengthen or shorten themselves (i.e. loosen or tighten themselves) to lower or raise the musical pitch of the sound (just as the longest and loosest strings of a piano give the lowest notes)[1],

(5) They allow the breath to pass through a narrow slit, without, however, causing them to vibrate—this is known as 'whisper.'

The slit or opening between the two Vocal Chords is called the Glottis.

Glottis.

Now let us suppose that the narrow slit has been formed. If no further modification is made by the parts of the throat and mouth above the Glottis, the sound which emerges from the mouth is that roughly represented in English as *er*, i.e. the sound we make when we hesitate for a word in a speech. This sound is known as the 'Indeterminate (i.e. unmodified) Vowel' and is indicated in this book by the symbol (ə).

Indeterminate Vowel.

If, on the other hand, some other sound is required, simultaneously with the vibration of the Vocal Chords a modification is made in the size and shape of the Pharynx. This is the cavity beyond the back of the mouth, forming the upper extremity of the

Pharynx.

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[1] The different modifications of the Glottis which produce 'chest-voice,' 'head-voice,' and 'falsetto' respectively, do not concern us here.

Gullet or food-passage. The passage between the Pharynx and the Larynx is open during the formation of speech-sound, but closed in the act of swallowing by a kind of valve or flap called the Epiglottis. (When we draw in our breath with our mouth full of food a crumb is apt to 'go down the wrong way,' i.e. to get into the Larynx or voice-box instead of into the Gullet or food-passage. To clear the obstruction we cough, i.e. we close the Vocal Chords and open them with a jerk, thus allowing a sudden jet of breath to escape.)

Epiglottis.

Tongue.
Soft Palate.

The size and shape of the Pharynx is regulated (1) by the lower and hinder part of the Tongue; (2) by the Soft Palate or Velum, the soft hinder part of the roof of the mouth. The various modifications produce the various Vowel-sounds.

Nose and Mouth.

From the Pharynx the breath can get out by one or both of two passages, the Nose and the Mouth. If the sound required is an ordinary vowel such as *ah* (ā), the Soft Palate closes, or nearly closes[1], the passage from the Pharynx to the Nose. If, on the other hand, it is to be a Nasalised Vowel as in the French *son, sain,* the passage to the Nose remains entirely open as well as the Mouth. Vowel-sounds can be further modified by the Rounding or pouting of the Lips as in *oo* (e.g. *boot*).

Rounding the Lips.

So much for the production of the Vowel-sounds.

Breath, Voice, and Whisper.

Consonants can be either Breathed, Voiced, or Whispered, that is to say, in the production of them the Glottis can be either (1) wid open, (2) closed to a narrow slit *with* vibratio of the Vocal Chords, or (3) closed to a narrow slit *withou* vibration of the Vocal Chords. But the most important variation is produced by the method and extent of the obstruction caused to the passage of the breath by

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[1] In the case of singers, particularly, it remains partly open, thu securing for the sound additional 'resonance' or ring.

the Soft Palate,
the Hard Palate,
the Tongue,
the Teeth-Roots or Alveoli,
the Teeth,
and the Lips,

acting separately or in various combinations.

d.

Thus in the formation of the consonant *d* (pronounced, of course, not as *dee* but as *d'*), (1) the Vocal Chords vibrate; (2) the Soft Palate closes, or nearly closes, the Nose-passage; and (3) the Tongue closes the Mouth-passage by touching with its tip the Roots of the upper front Teeth: *d* may therefore be described as the *voiced* Alveolar Stop.

t.

If the organs are in the same positions save that the Glottis is wide open so that the Vocal Chords do not vibrate, the result is *t*, which may be described as the *breathed* (or unvoiced) Alveolar Stop. If again the organs are in the same positions as in pronouncing *d*, save that the Nose-passage is left wide open by the Soft Palate, the result is the ordinary *n*, which is the voiced Nasal Alveolar Stop.

n.

Vowel and Consonant Defined and Distinguished.

A Vowel, then, may be defined as Voice (i.e. vibration of the Vocal Chords) modified in the Pharynx by the Tongue and the Soft Palate, but *without audible friction* (which would make it a Consonant); while a Consonant is the result either of audible friction (as *s*) or of the stopping of the breath in some part of the Mouth or Throat (as *t*). In a Vowel the action of the Glottis is a primary element, in a Consonant merely secondary; in a Vowel the configuration of the Throat and Mouth is of secondary importance only, in a Consonant it is essential[1].

Classification of Consonants.

In describing the production of sounds we dealt with the Vowels first, but as the Classification of Vowels presents the greater difficulties, we shall now reverse the order and take the Classification of Consonants.

Consonants may be classified (i) according to Form; (ii) according to Place, i.e. place of formation.

(i) By Form there are four classes:

Spirants.

(1) Spirants or Open Consonants: in these the passage (e.g. between the Tongue and the Teeth-Roots, as in *s*, *z*) is simply narrowed, not entirely closed (this would make it a Stop; see Diagram 2, where three typical positions of the Tongue are shown in section).

Stops.

(2) Stops or Shut Consonants (sometimes called Mutes, as being, strictly, not sounds but 'silences'): in these the passage (e.g. between the Tongue and the Teeth-Roots, as in *t*, *d*) is entirely closed.

Nasals.

(3) Nasals or Nose Consonants: in these the Mouth-passage (e.g. between the Tongue and the Teeth-Roots, as in *n*) is entirely closed, the breath escaping through the Nose.

Liquids: *l*.

(4) Liquids or i. Divided Consonants: these are the different varieties of *l*; the middle of the passage (e.g. between the Tongue and

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[1] Sweet, *Primer of Phonetics*, p. 30.

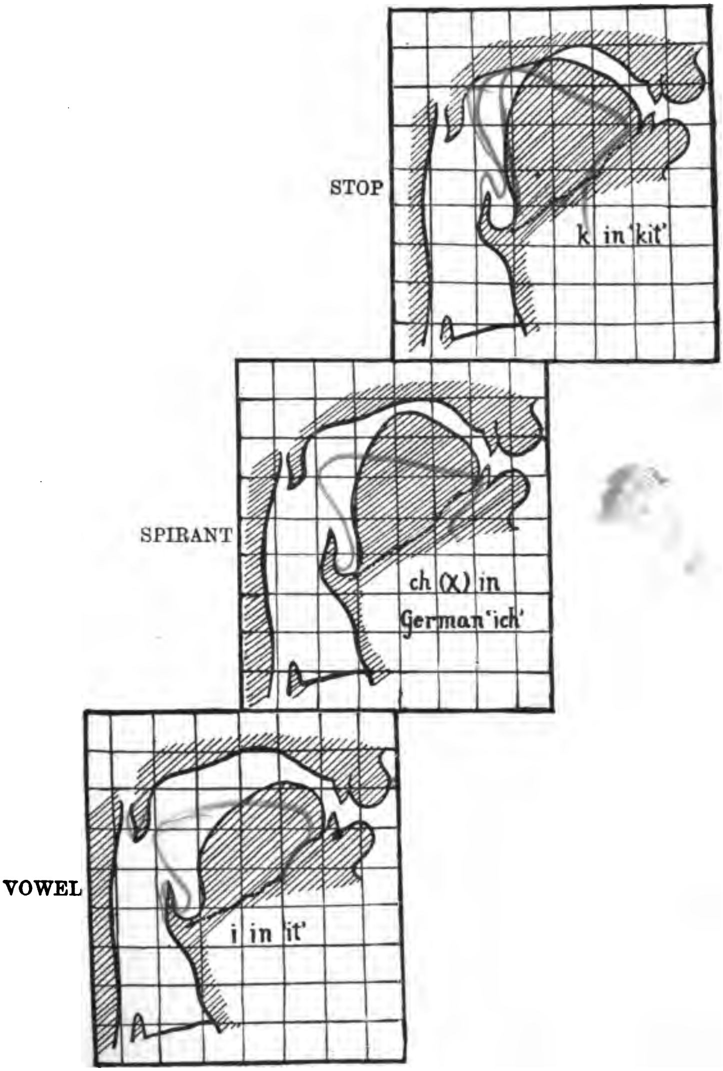

Diagram 2 (see pp. 20 and 29).

the Teeth-Roots, as in the English *l*) is closed, while one or both sides remain open to the passage of breath.

r.

ii. Trilled Consonants: these are the different varieties of *r*; they are really a variety of Spirants; they consist in the vibration of the flexible parts of the Mouth either against one another (e.g. the Lips, as in the interjection *brr!*) or against a firm part (e.g. the Tongue against the Teeth-Roots, as in the Scotch trilled *r*). In the English *r*, as in *run*, no trill takes place, the tip of the Tongue merely going into position for a trill which never comes.

(ii) By Place there are seven main classes:

Velars.

(1) Velar or Back Consonants (also called Guttural): these are formed by the *root* of the Tongue and the Soft Palate (or Velum). Instances are: the *k*- or *q*-sound before such vowels as *ah, aw* (ā, ɔ); the *ch* (written phonetically x) of German *ach*; and the *ng* (ɒ) of *sing*. The first of these is a Velar Stop, the second a Velar Spirant, and the third a Velar Nasal.

Palatals.

(2) Palatal or Front Consonants: these are formed by the *middle* of the Tongue and the Hard Palate. Instances are: the *k*-sound before such vowels as *e* in *ken* or *i* in *kin*; the *ch* (written phonetically χ) of German *ich*; and the *gn* (ñ) of French *ligne*. The first of these is a Palatal Stop, the second a Palatal Spirant, and the third a Palatal Nasal.

Cerebrals.

(3) Cerebral Consonants: these are formed by the *blade* (or part immediately behind the tip) of the Tongue and the front of the Hard Palate, as *sh* (ṣ) in *she*, which is a Cerebral Spirant.

Alveolars and Dentals.

(4) Alveolar or Teeth-Root Consonants (also called Dental[1]): these are formed by the tip of the Tongue and the *roots* of the upper Teeth. Instances are: *t* as in *ten*; *s* as in *sun*; and *n* as in *not*. The first of these is an Alveolar Stop, the second an Alveolar Spirant, and the third an Alveolar Nasal.

Interdentals.

(5) Interdental Consonants: these are formed by the tip of the Tongue and the *tips* of the front Teeth, as *th* (þ) in English *thin*, which is an Interdental Spirant.

Labiodentals.

(6) Labiodental or Lip-Teeth Consonants: these are formed by the upper Teeth and the lower Lip, as *f* in English *fat*, which is a Labiodental Spirant.

Labials.

(7) Labial or Lip Consonants: these are formed by the upper and lower Lips. Instances are: *p* as in English *pit*, and *m* as in *man*, the first being a Labial Stop and the second a Labial Nasal.

Besides its classification according to Form and Place a Consonant can belong, as has been explained above, to one of three classes according as it is Breathed, Voiced, or Whispered. It is sufficient for our present purpose if we distinguish Breathed and Voiced. In the following Table of Consonants it should be understood that most of the blank spaces could be filled up by instances from various less familiar languages and dialects.

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[1] The true Dental is heard in the French *t*, as in *ton*, compared with the Alveolar English *t*, as in *ten*.

TABLE OF

1. BREATHED:

	Spirant	Stop[1]	Nasal	Liquid	
				Divided	Trilled
Labial	wh *where*, *twenty*	p p^h *pen* *uphold*[2]	—	—	—
Labio-dental	f *fan*	—	—	—	—
Inter-dental	þ *thin*	—	—	—	—
Alveolar (or Dental)	s *so*	t t^h *ten* *at-home*[2]	—	—	—
Cerebral	ṣ (or *sh*) *fish*	—	—	—	—
Palatal	χ[3] Germ. *ich*	k k^h *king* *inkhorn*[2]	—	—	—
Velar	x Germ. *ach*	q q^h *queen* —	—	—	—

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[1] For the Aspirated Stops see below under the Aspirate.
[2] Only approximate; see below under the Aspirate.
[3] Not, of course, the *Greek* χ, which was (k^h).

CONSONANTS.

2. VOICED:

	Spirant	Stop[1]		Nasal	Liquid	
					Divided	Trilled
Labial	w *were*	b *bet*	b^h *abhor*[2]	m *am*	—	r Exclamation spelt *brr!*
Labio-dental	v *van*	—		—	—	—
Inter-dental	đ *then*	—		—	—	—
Alveolar (or Dental)	z *zeal, raise*	d *den*	d^h *adhere*[2]	n *in*	l *let*	r *run* Scotch and N. Eng. Dial. (Standard Eng. is untrilled)
Cerebral	ẓ (or *zh*) *azure, rouge*	—		—	—	r S.W. English Dialects
Palatal	y *you*	g *leg*	g^h *leg-hit*[2]	ñ *ligne* (Fr.) *señor* (Sp.)	λ *gl* in It. *degli*	—
Velar	ȝ Germ. *Lage*	ɡ —	$ɡ^h$ —	ŋ (or *ng*) *sing, sink*	—	ṛ Germ. *Rat*, Fr. *rat*, Northumbrian 'burr'

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[1] For the Aspirated Stops see below under the Aspirate.
[2] Only approximate; see below under the Aspirate.

Uvula-Stops *tn*, *dn*, *kn*, *kə*, *pm*, *bm*.

One species of English consonant is not classified above, the Uvula-Stops. Instances are the breathed Alveolar Uvula-Stop *tn* in *bitten*, and the corresponding voiced Alveolar Uvula-Stop *dn* in *bidden*. These are formed by placing the Tongue in the position for *t* or *d* and then 'exploding' the breath through the Nose by means of the Uvula (or end of the Velum), instead of through the Mouth by means of the Tongue. The corresponding *kn* is sometimes heard in such words as *bacon*, becoming (kə) before *g* as in *You c'n gó*. Similarly, we have *pm* and *bm* in such words as *cap'm* (generally spelt 'cap'n,' for *captain*).

Breathed Nasals and Liquids.

As an instance of a *breathed* Nasal we may add the *kn* in *know*, which was pronounced as a breathed *n*, or (nh), 150 years ago, though the word is now identical with *no*. Even in Modern English, when *n* adjoins a breathed spirant (e.g. *sneer*) it is said by some phoneticians to lose its voice (i.e. become breathed) in part; similarly *m* (e.g. *smear*), and the liquids *l* (e.g. *play*) and *r* (e.g. *pray*).

English *ch*, *j* or 'soft' *g*. English *x*.

It should be noted here that the English *ch* in *church* is simply a combination of *t* and *sh* (ṣ), and English *j* or 'soft' *g* in *judge* a combination of *d* and *zh* (ẓ), while the English *x* (contrast the breathed Velar Spirant (x) = *ch* in Germ. *ach*) is a superfluous letter, being simply *ks* as in *fix* or *gz* as in *exact*.

g and g^h.

It will be noticed that we have given no examples above of the sounds g and g^h. These sounds, which will be referred to in a subsequent chapter, bear the same relation to q and q^h as g and g^h do to k and k^h. The distinction between q and k is that *q* is produced further back in the throat; *q* is heard in English before *w* (spelt *u*), as in *queen*, and also before certain vowels, e.g. *aw* (ɔ) as in *caw*, and *o* as in *cot*. The difference may be felt by comparing *king* (kiə) with *kong* (qoə).

q and *k*.

Diagram 3 (on the next page) is intended to illustrate the above classification of Consonants. It represents in three sections (from left to right):

the back of the Throat,
the Uvula and Soft Palate,
the back of the Hard Palate,
the front of the Hard Palate,
the Teeth-Roots,
the Upper Teeth,
and the Upper Lip.

The black dots represent approximately the point of contact or friction between the tip (or other parts) of the Tongue and the Palate, Teeth-Roots, and Upper Teeth, except in the case of the Labiodentals and Labials, where the place of the Tongue is taken by the Lower Lip. The symbol of each sound is given beneath the black dot where contact or friction takes place, the Breathed above the Voiced. The dotted lines denote approximately the passage of the breath during the pronunciation of the various Consonants. The Tongue and the lower part of the Mouth are not represented.

Classification of Vowels. Difference between (χ) and (i).

We defined a Vowel as Voice (i.e. vibration of the Vocal Chords) modified in the Pharynx by the Tongue and the Soft Palate, but without audible friction. When we form the Palatal Spirant (χ)[1] (*ch* in German *ich*), the breath passes through a narrow passage between the

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[1] Not, of course, the *Greek* χ, which was (k^h).

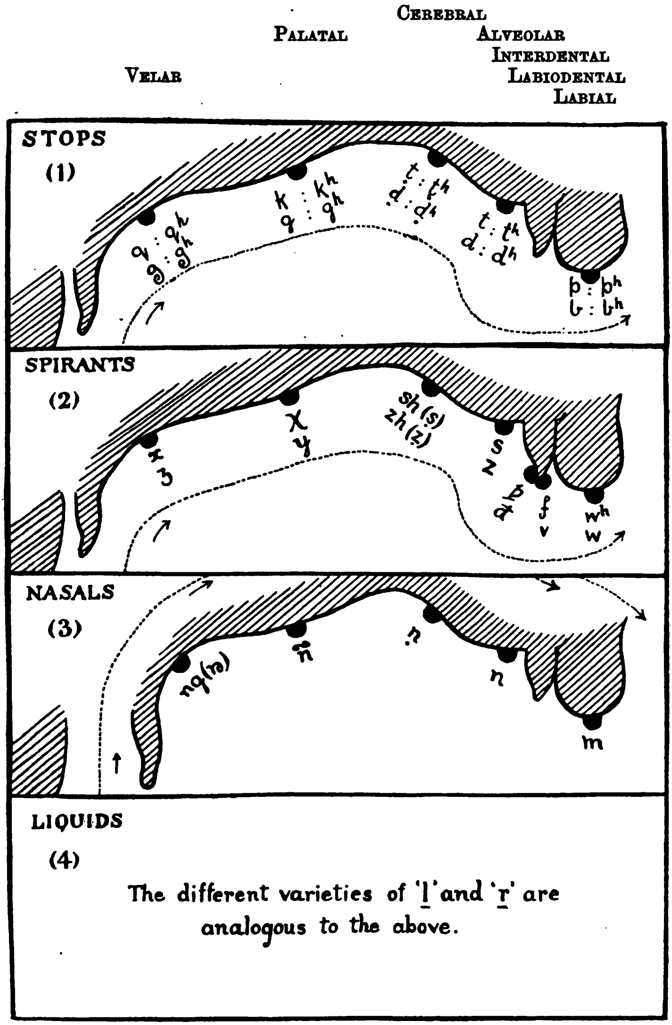

DIAGRAM 3 (see p. 27).

middle of the Tongue and the Hard Palate, and there is audible friction. Now if we lower the Tongue slightly from this position, and at the same time cause the Vocal Chords to vibrate, there is Voice, but no audible friction; we are producing the vowel in *it.* The Tongue is still arched towards the Hard Palate but not so high as before (see Diagram 2 on page 21). Again, if we pronounce the vowel *aw* (ɔ) in *law,* we find that the Tongue sinks to the bottom of the Mouth (see Diagram 4). Lastly, if we pronounce the vowel *ah* (ā) in *father,* we find the Tongue in an intermediate position. (The changes of position may be easily studied in a mirror which faces the light.)

Vowel Positions: *i* in *it,*

aw,

ah.

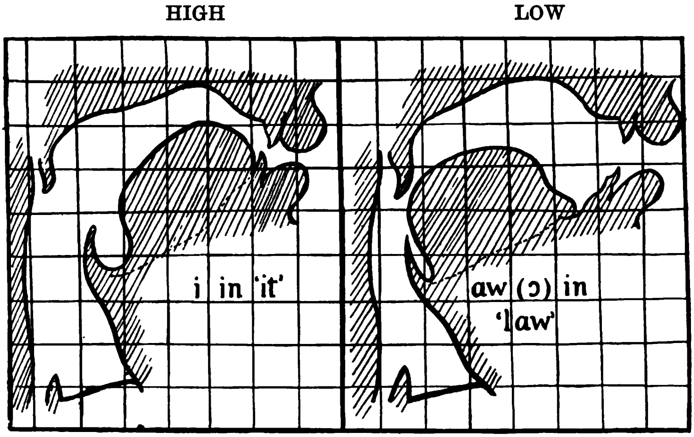

Diagram 4. [This also illustrates FRONT and BACK.]

Thus, in the formation of the Vowels, we have three Vertical positions of the Tongue, *Low, Mid,* and *High.*

(1) Vertical Positions.

(2) Horizontal Positions.

We have also three Horizontal positions. If we pronounce the *i* in *it*, then the word *err* (ə̄), and then the *ah* (ā) in *father*, we find that the Tongue moves horizontally from one position to the next, being furthest forward at (i) and furthest back at (ā) (see Diagram 4 on the previous page). These three Horizontal positions are called *Front*, *Mixed*, and *Back* (or Palatal, Gutturo-Palatal, and Velar or Guttural).

If we combine these two classifications, Vertical and Horizontal, we have nine principal positions.

Now each of these nine vowel-sounds can be still further modified. If we take the mirror again and pronounce the *i* in *it* and then the *aw* (ɔ) in *law*, we notice that the corners of the Mouth in the first case are wide apart in an unconstrained position, and in the second case are slightly drawn together. This drawing together of the corners of the Mouth is called Rounding (or Labialisation), and all vowels can be classified as *Round* or *Unround*.

(3) Rounding.

(4) Narrow and Wide.

Lastly, if we contrast the *aw* (ɔ) in *law* with the *o* in *not*, we find that in the first case the Tongue is more tense and the surface more convex than in the second. This distinction is known as that of *Narrow* (tense and convex) and *Wide* (loose and concave).

To recapitulate, we have these four modes of classifying the vowels:

Low, Mid, or High,
Front, Mixed, or Back,
Round or Unround,
Narrow or Wide,

making a total of thirty-six varieties. Still further distinctions, into which we need not enter, bring the number to seventy-two[1].

The following scheme will suffice for our present purpose:

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[1] See Sweet, *Primer of Phonetics*.

TABLE OF PRINCIPAL VOWELS.

			LOW	MID	HIGH
FRONT	Narrow	Round	—	(*ö*) *in Fr.* peu	(*ü*) *in Fr.* pur
		Unrd.	(e) first element of diphthong in *fair*	(*e*) *in Fr.* été	(*i*) *in Fr.* si
	Wide	Round	—	—	—
		Unrd.	(æ)[1] in *man*	(e) in *men*, and first element of diphthong in *say*	(i) in *bit*, and first element of diphthong in *fear* and when long of that in *see*
MIXED	Narrow	Round	—	—	—
		Unrd.	(ə̄) in *sir*	—	—
	Wide	Round	—	—	—
		Unrd.	(a) first element of diphthong in *how*	(ə) in th*e* sof*a*	—
BACK	Narrow	Round	(ɔ) in *law*	(*o*) *in Fr.* beau	(ū) in *cruel*
		Unrd.	—	(ɐ) in *butt*, *come*, and first element of diphthong in *high*	—
	Wide	Round	(o) in *not*, and first element of diphthong in *boy*	—	(u) in *put*
		Unrd.	(*ɒ*) *in Fr.* pas	(ā) in *father*	—

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[1] This symbol is *not to* be confused with the Latin diphthong ae *which is sometimes* so written.

From the above scheme it will be seen that we have Eleven[1] Simple Vowels in English, namely those in the following words: l*aw*, n*o*t, b*u*tt, f*a*ther, cr*u*el, p*u*t, s*ir*, th*e* sof*a*, m*a*n, m*e*n, b*i*t. The nine[1] other so-called Vowels, exemplified in b*oy*, s*o*, h*igh*, t*oo*, h*ow*, f*air*, s*ay*, f*ear*, s*ee*, are Diphthongs (see below).

Other Sounds.

Besides Vowels and Consonants there are several other classes of sounds, which we shall notice in the following order: Nasalised Vowels, 'Sonants,' Diphthongs, Glides, and the Aspirate.

Nasalised Vowels.

In the production of ordinary Vowels the passage to the Nose is closed or nearly closed, the breath escaping through the Mouth. If, however, the Nose-passage remains wide open, so that the breath escapes both by the Nose and by the Mouth, the result is a Nasalised Vowel. These are not found in English but are common in French, the four varieties being heard in the words *sang*, *vin*, *un*, and *son*. The vowel heard in *pain*, *vin*, is simply the vowel of *père* nasalised. The final syllables *-am*, *-em*, *-um*, etc. in Latin, elided in poetry before a vowel, were probably of this nature. If the passage to the Nose is only partially opened, we get the 'nasal twang' of some English speakers. Nasalised Vowels are generally represented thus, $a^{ŋ}$, $o^{ŋ}$, $i^{ŋ}$, etc.

'Sonants.'

The term 'Sonant'[2] is applied generally to all syllable-forming or accent-bearing sounds, and therefore includes not only Vowels but certain Consonants when used as syllables. For convenience' sake it is often restricted to the latter meaning. The more important of these sounds are the following (the Sonant use of the Consonant being indicated by the diacritic ̥):

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[1] Broadly speaking; for further distinctions see Sweet, *Primer of Phonetics*.

[2] The discussion of this term strictly belongs to the chapter on Accent, but is inserted here for convenience.

Spirant (z̥),
Nasals (ᵽ̥) (n̥) (m̥),
Liquids (l̥) (r̥).

All these except r̥ occur in English, e.g.:

(z̥) in *As big as Dick* (z̥ big z̥ dik);
(ᵽ̥) in *You c'n gó* (yūw kᵽ̥ gōu̯)[1];
(n̥) in *London* (lɐndn̥), *Tom an' I* (tom n̥ ɐi̯), *isn't* (izn̥t)[2];
(m̥) in *Madam* (mædm̥), *Yes'm* (yes m̥), *schism* (sizm̥), *Egham* (egm̥);
(l̥) in *table* (tei̯bl̥), *When'll you come* (when l̥ yū kɐm).

Diphthongs.

In the widest sense a Diphthong is the combination of two Sonants (or syllable-forming sounds) into one syllable, e.g. (e) and (i) in *day* (dei), (i) and (ə) in *India* (indiə); but the term is generally confined to such combinations as (ei) in *day*, where the first element remains a true Vowel while the second becomes consonantal (Consonant *i* and Consonant *u* are generally written *i̯*, *u̯*[3]). With at least 72 possible Vowels and a number of Sonant (i.e. syllable-forming) Consonants, it is obvious that a very great number of Diphthongs are possible. The following occur in English:

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[1] Notice the Uvula-Stop (kᵽ) used as a syllable (see above, p. 26).

[2] *Wouldn't*, *couldn't*, show the Uvula-Stop (dn) used with *t* to form a syllable. In such words as *bacon*, *token*, three distinct pronunciations may be heard, (bei̯kən) (rather stilted), (bei̯kn̥) without the Uvula-Stop (most usual), and (bei̯kn̥) with the Uvula-Stop (rather careless). (See above, p. 26.)

[3] Broadly speaking they are the consonants (y) and (w), and except in diphthongs they are so represented in this book, but a distinction must have been made in the original language, at any rate between (i̯) and (y). See Chap. IX.

(ɐi̯) in *high*,
(ei̯) in *say*,
(īi̯) in *see*,
(oi̯) in *boy*.
(au̯) in *how*,
(ōu̯) in *so*,
(ūw)[2] in *too*,
(eə) in *fair*[1],
(iə) in *here*[1],
(ūə) in *poor*[1],

In English we also have Triphthongs, e.g.:

Triphthongs.

(ɐi̯ə) in *fire, higher*[1],
(au̯ə) in *hour, power*[1],
(oi̯ə) in *loyal, destroyer*[1].

Of these, *loyal* generally counts as a disyllable, while *fire* and *hour*, though generally reckoned as monosyllables, in poetry can be scanned as disyllables, and vice-versâ *higher* and *power* sometimes appear as monosyllables.

Glides.

It is obvious that, in speaking, the transition from one sound to another (except where the second is formed in the same Place as the first, as *nd*) cannot be absolutely instantaneous. Thus in pronouncing the word *echo* (ekōu̯) the tongue has to pass (1) from the *e*-position to the *k*-position, and (2) from the *k*-position to the *ō*-position. Now, as the breath during these transitions continues to pass through the mouth, transition-sounds are produced between one position and the next. These transition-sounds are known as Glides. The On-Glide is the transition-sound which precedes a Vowel or Consonant, the Off-Glide that which follows it. In writing which is swift or careless, transition-strokes between letters and

On-Glide.
Off-Glide.

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[1] Final *r* is silent except before a Vowel, e.g. *here* (hiə), but *here and there* (hiər n̥ đeə).

[2] The second element here is more definitely consonantal, and so is written *w*, not *u̯*.

words are apt to develop till to a stranger's eye they appear more important than the letters themselves, and thus tend to make the writing illegible. In a similar way, in speech, Glides are capable of developing into ordinary sounds. The importance of Glides in questions of Phonetic Change is therefore obvious. Thus we find the Greek Ἀλκμήνη appears in Plautus as *Alcumena*, δραχμή as *drachuma*, μνᾶ as *mina*. The same principle is seen in such pronunciations as *Henery* for *Henry*, *umberella* for *umbrella*[1]. Similarly we have ἕβδομος for ἕπτ-μος[2], ἀνδρός for ἀνρός, εἵλκυσα for εἷλκ-σα. The English *thunder* and *timber*, beside their German cognates *Donner* and *Zimmer*, are cases in point.

The Aspirate.

In the case of an initial vowel (i.e. not of a word but of a breath-group[3]), the sound may have either (1) the 'gradual beginning,' i.e. an On-Glide of the glottis from the breath-position to the voice-position; or (2) the 'clear beginning,' where the breath is kept back till the glottis is ready to produce the sound. In these cases the stress begins on the vowel itself. If, on the other hand, the stress begins *before* the vowel, i.e. on the On-Glide of the 'gradual beginning,' we have the Aspirate, e.g. we have *ho* instead of *o*. Initial *h*, then, in English is the stressed form of the 'gradual beginning.' Between vowels (contrast *hold* with *behold*) the *h* is simply a 'jerk of the breath.'

Aspirated Stops.

When the Glide between a Stop (*k*, *g*, *t*, *d*, etc.) and the following vowel maintains the stress of the Stop, we have the Aspirated Stops, k^h, g^h, t^h, d^h, etc. The Greek Aspirates χ, θ, φ were of this nature. The same sounds are heard in the Irish pronunciation of English, e.g. *P'hat*, *t'hell*, for *Pat*, *tell*.

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[1] Cf. 'Naughty little *Suck-a-Thumb*' for *Suck-Thumb* in the nursery tale.

[2] Through ἕβδ-μος.

[3] See page 36.

CHAPTER III.

ACCENT.

Sentence-division—Quantity—English pronunciation of Latin—Stress—Stress and Quantity in Metre—Pitch and Tone-of-Voice distinguished—Pitch and Stress distinguished—Predominance of Pitch or Stress—*Accent in Greek*—Stress in Modern Greek—*Accent in Latin*—Vowel-weakening—Syncope—Accent in Literary Latin—Effect of Accent on Greek Loan-words—Stress in Praenestine—*Enclitics*—in English—in Greek—in Latin.

IN the previous chapter we have considered the formation and classification of sounds; each sound has been considered separately. We have now to discuss sounds in combination, that is, in words and sentences.

Sentence-division.

It is important to realise at the outset that the division of a sentence into words is a *logical*, not a *phonetic* division; i.e. though in writing (and in thinking) we leave spaces between the words, in speaking there is no spacing at all. The only division made in speaking is the separation into Breath-Groups, i.e. the groups of sounds made between one taking of breath and another. In a long sentence this division usually coincides with the logical division into clauses. It is interesting to note here that in Greek inscriptions and papyri the spacing of words is almost unknown before the Roman period.

In discussing the Elements of Language in Chapter I. we spoke of Gesture, Expression of Feature, Speed of Utterance, Tone of Voice, Musical Pitch, and Emphasis or

Stress. The last three concern us here, and we must add another, Quantity or Length.

Quantity.

The Quantity or Length of a sound is its *duration* relative to the adjacent sounds. Phoneticians distinguish five degrees of Quantity; but three, or even two, are sufficient for practical purposes[1]. Latin and Greek metre distinguished two. It is true that difference of Quantity is often accompanied by actual (i.e. organic or structural) difference of sound, e.g. in Greek *ŏ* was narrow and *ō* wide, while in Latin it was vice-versâ. But we must be careful in speaking of Quantity to clear our minds of such distinctions as are made in the 'old-fashioned' pronunciation prevailing at many English schools, which distinguishes *mensā* from *mensă* by pronouncing *ā* to rhyme with *hay* (hei̯), and *quīs* from *quĭs* by pronouncing *ī* to rhyme with *high* (hɐi̯). A good instance of difference of Quantity (apart from difference of Stress—see below) is heard in the word *murmur* (which may be written phonetically mə̄mə)[2], the first syllable taking about twice as long as the second to pronounce.

English pronunciation of Latin.

Stress.

Loudness or Stress (Emphasis) depends on the *size* of the vibration-waves of which sound consists. It varies with the effort by which the breath is expelled from the lungs. For practical purposes three varieties of Stress are sufficient—strong, half-strong, and weak. These are exemplified in *contradict*, which might be written ᴄᴏɴᴛʀᴀDICT, the third syllable being strong, the first half-strong, and the second weak. The syllable which is pronounced with the strongest Stress in a word is said to bear the Stress-accent. In long words in English two syllables ordinarily stand out above the others in point of Stress. Of these one is generally strong, and the other half-strong. In *impossibility*, for instance, the *-bil-* is strong and the *im-* half-strong, whereas in the shorter word *impossible* the *-poss-* alone stands out above the other syllables. This Stress-accentuation has its parallel in music, where in bars of more than two or three beats there is always a secondary accent as well as the primary accent, i.e. we count **1** 2 3 4, or **1** 2 3 4 5 6.

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[1] In Aryan (see Chapter v.) vowels were probably of three different lengths.

[2] Strictly speaking there is a slight organic (structural) difference, too. See table of Vowels, p. 31.

Stress and Quantity in Metre.

Plautus.

English metre is a matter of Stress, Greek of Quantity. Though Latin metre by the time of Cicero had become entirely quantitative, poetry of the earlier period shows traces of Stress-scansion. Plautus, for instance, in his Iambics and Trochaics, requires an Iambus only at the end of the line, e.g.

Iús iurándum reí seruándae, nón perdéndae cónditúmst;

often neglects elision, e.g.

Mustéla múrem||abstulit praeter pedes;

Modern Greek.

and allows scansions such as *pĕr ắnnō|nam*; *sĕnĕctŭ́|tem*; *ăge ăbdŭ́c|*; and even *quĭ́d ĭll|aec.* Modern Greek poetry, like English, goes by Stress, as may be seen by scanning this line of a modern hexameter version of the *Odyssey*:

τόπους δι|ῆλθε, πορ|θήσας τῆς | Τροίας τὴν | ἔνδοξον | πόλιν.

Quantity in English metre.

In Elizabethan times attempts were made to write English poetry according to Latin (quantitative) rules of metre. The painful result may be gathered from the following hexameter lines from Tottel's *Miscellany* (1557):

Gríslye fa|cés froun|cíng, eke a|gaínst Troy | leáged in | hátred—
Múch lyk on | á moun|táyn thee | trée dry | wýthered | oáken—[1].

A successful attempt in the same direction is Tennyson's Alcaic Ode to Milton, of which we quote the first stanza:

O mighty-mouth'd inventor of harmonies,
O skill'd to sing of Time or Eternity,
God-gifted organ-voice of England,
Milton, a name to resound for ages.

But these lines are successful only because they combine Stress with Quantity throughout.

Pitch and Tone-of-Voice distinguished.

Pitch and Stress distinguished.

It is usual to distinguish Pitch from Tone-of-Voice, the one being characteristic of the syllable, the other of the sentence. To Tone-of-Voice we may assign intonations characteristic of a statement, a question, of indignation, surprise, pity, endearment, etc. These need no comment. In dealing with Syllable-Intonation or Pitch, we should first distinguish it clearly from Stress. Stress, as we have seen, depends on the *size* of the vibrations of which voice consists; Pitch depends on the *number* (i.e. frequency) of these vibrations. Pitch, as it were, gives the notes, while Stress adds the 'marks of expression,' loud or soft. From the point of view of variation of musical tone or Pitch, ordinary speaking stands midway between the monotone of the clergyman 'intoning' and actual singing. The monotone does not vary at all, while, in singing, the musical 'intervals' (e.g. between F and F sharp) are greater as a rule than in speaking. That is to say, while in music we use only one note intermediate between A and B, namely A sharp or B flat, in speaking we use an indefinite number of intermediate notes, differing from each other by the smallest fractions of semitones. Pitch-accent, then, indicates musical tone, highness or lowness in the musical scale; and the syllable which has the highest musical tone in a word is said to bear the Pitch-accent.

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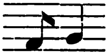
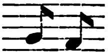
[1] Quoted by Saintsbury, *Elizabethan Literature*, p. 24.

Predominance of Pitch or Stress.

These two elements of speech, Pitch and Stress, are found in all languages, one or the other generally predominating. In English, Stress predominates. We have many words which (roughly speaking) differ only in Stress, e.g. *cónduct* (noun) and *condúct* (verb), *áttribute* (noun) and *attríbute* (verb). On the other hand, in certain other languages, e.g. Siamese, Pitch is so important an element that to sing a native song to a European air results in sheer nonsense, as many words differ only in Pitch. There are few, if any, examples of English words differing only in Pitch. It is true that the word *rather* used in answer to a question such as *Would you like to go?* denotes doubtful desire pronounced in one way and intense desire pronounced in another[1]; but this should probably be considered as sentence-intonation or Tone-of-Voice.

Accent in Greek.

In Greek, Pitch almost certainly predominated in Classical times. This is indicated (1) by the accent-system, (2) by phenomena of the language itself, (3) by the statements of native grammarians. The ancient Greek said  πα-τήρ, but  πά-τερ.

The accent-system is ascribed by tradition to the Alexandrian critic, Aristophanes of Byzantium, who is said to have invented the symbols about 200 B.C. with a view to preserving the 'correct' pronunciation. The Acute-accent

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[1] A third pronunciation, placing the *Stress*-accent upon the last syllable (*rathér*) is sometimes heard in educated English.

(e.g. *τί;*) denotes a *rising* tone, as in English *what?*; the Grave-accent denotes either a *falling* or a *level* tone, as in English *look here,* where *look* bears a level tone and *here* a falling tone. Syllables written without accent were understood to be Grave. The Circumflex (´ˋ or ˆ) denotes a *rising-falling* tone, i.e. Acute followed by Grave in the same syllable. This is heard in the English *Oh!* expressing sarcasm, sometimes written *Oho!*[1] Pitch-accent was disregarded in metre in Classical times, but is taken into account in the choliambics of Babrius (170 A.D.), whose last foot always bears the accent on the first syllable. In Modern Greek, Stress predominates, e.g. *Αἴγῑνα* is now pronounced *Αἴγῐνα* with the stress on the first syllable, while in certain dialects Stress has reduced *παιδί* to *π'δί, δουλεύω* to *δ'λεύου, ἐγώ* to *ἰγώ.*

Stress in Modern Greek.

Accent in Latin.

Vowel-Weakening.

Syncope.

In Latin, particularly Early Latin, and probably the vulgar or non-literary Latin of Classical times, the predominating accentuation was, like the English, Stress. Thus *légimini* was once identical with *λεγόμενοι,* but, owing to the Stress on the first syllable, the vowels of the other syllables were 'weakened.' Similarly the Stress-accent preserved the *a* in *ágo*, but *súbago* became *subigo.* The same phenomenon is seen in the English *próphet,* which is now indistinguishable from *prófit*; and even Herrick (1648) rhymes *mínute* with *ín it.* Stress in Early Latin was responsible for the dropping of syllables (Syncope), as in *est,* representing the original *esti,* seen in Greek *ἐστί* and Sanskrit *asti.* This does not occur in Greek. We may compare *audin* for *audísne,* the forms *dein* and *proin* used before a consonant, *quindecim* for *quínquedecem*, *uindemia* for *uinidémia* (*demo*), and *ualde* for *uálide.* In later Latin we find *uirdis* for *uíridis*, whence comes the French *vert.* English parallels are *búsiness* pronounced (biznis), *régiment* pronounced (redẓmn̥t), *chócolate* pronounced (tṣoklət), *vénison* pronounced (venzn̥), and *don't* for *dó not.* In America a word like *penitentiary*, *California*, often drops *i* before the stressed syllable (penténṣəri, cælfɔ́nyə). The action of Stress in Low Latin is seen in the French *âme* for *ánimam*, *même* for *métipsissimum.* We may compare Cicero's story of the soldiers making the cry of a fig-seller (*Cauneas*, i.e. 'Caunean figs') into an evil omen *cáue ne eas.* In the Literary and educated Latin of the Classical period the Stress-accent can hardly have been so strong, otherwise Roman poetry must have lost much of its rhythm. This may be seen by pronouncing a line of Virgil thus:

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[1] This again may be an example rather of sentence-intonation or Tone-of-Voice than of syllable-intonation or Pitch.

Accent in Literary Latin.

Massylíque rúunt équites et odóra cánum uís.

The difference between the Greek and the Latin accent may be seen in Greek loan-words, which appear in Latin with different quantities. Thus ἄγκῡρα becomes *áncŏra*, *σέλῑνον sélĭnum*, and Φίλιππος, the coin, is scanned by Plautus *Philĭppus*; while in later times Σοφίᾱ becomes Sofí̆ă, *ἔρημος érĕmus*, and *εἴδωλον ídọ̆lum.* In the dialect of Praeneste Stress was even stronger than in Early Latin, if we may judge by such forms as *Mgolnia* for *Magolnia* in inscriptions and *conea* quoted as Praenestine for *ciconia* ('stork').

Effect of Accent on Greek loan-words.

Stress in Praenestine.

We said above that within certain groups there is no space between spoken words. A short sentence, then, is phonetically one long word comprised of syllables of different accent-value. Thus

Enclitics.

In English.

What did you hit him for? bears a primary accent on *hit* and a secondary accent on *What*, just as *impossibility* bears a primary accent on *-bil-* and a secondary accent on *im-*. *Did, you, him, for,* may in this sentence be termed unaccented words. If, however, we add the word *then*, we find that *for* at once bears a secondary accent. This is the principle of Enclitics. Unimportant words, like unimportant syllables, are unaccented; but, just as a long word bears a secondary as well as a primary accent, so, if too many (in English, as a rule, more than two) unimportant words come together, one has to bear an accent.

In Greek.

The accentuation of Enclitics in Greek is closely parallel, but it should be remembered that Greek Enclitics were *Pitch*-enclitics, while in English we have *Stress*-enclitics. In Greek an enclitic not only 'threw its accent back' upon a previous enclitic, but under certain circumstances changed the accentuation of a previous accented word, e.g. πατρὸς ὄντος, but πατρός τε.

In Latin.

This has no parallel in English, but in Latin the principle was recognised in the case of *-que, -ue,* and *-ne*, which were spelt as part of the preceding word. The Romans said *nóctes* but *noctésque*, and Plautus scans *ín me, intér se,* unless the pronoun is emphatic, with which we may compare πρός με, κατά σου, in Greek.

CHAPTER IV.

SPELLING AND PRONUNCIATION, WITH A SKETCH OF THE HISTORY OF OUR ALPHABET.

Phonology of Modern Languages—of Dead Languages—*Data for investigating the Pronunciation of Latin and Greek*—Grammarians—Transliterations—Plays on Words—Variations of Ancient Orthography—Changes of Spelling—Pronunciation of Modern Descendants—Cries of Animals in Literature—*Pronunciation of Attic Greek*—Consonants—Vowels—Diphthongs—*Pronunciation of Latin*—Consonants—Vowels—Diphthongs—Greek and Latin Pronunciation contrasted—Greek and English—Latin and English—Double Consonants—Example of Greek Pronunciation—of Latin—*English Spelling*—Causes of the Anomalies—Difficulties of Reform—Example of English Pronunciation—*The Alphabet*—Primitive Beginnings of all Alphabets—Memory-Aids—Message-Sticks—Pictograms— Ideograms—Phonograms—True Alphabet—Egyptian Scripts—the Phoenicians—the Origin of our Alphabet—Oldest Examples—Sister Alphabets—*Earliest Greek Inscriptions* — Alphabet of 750–600 B.C. — Western, Eastern, and Attic Groups—Peisistratus Inscription—Archonship of Eucleides—the 'Breathings'—Eretrian Inscription—Chalcidian Colonies—Rhegine Inscription—Inscription from Volci—*Latin Alphabet*—Appius Claudius—Traces of the Older Alphabet—Greek Letters—Other Modifications—Monumentum Ancyranum—Medieval Orthography—*Subsequent History of our Alphabet* — Cursive — St Patrick — Alcuin — Caroline Minuscule—Black Letter—Roman Type—'Italian' Handwriting.

FROM Chapter II. it will be seen that the number of possible speech-sounds is so large that even if it were possible to represent each by a special sign, the result would be an alphabet too clumsy for practical use. Now though the number of sounds possible to the human voice is very great, the number of sounds which compose any single language is comparatively small[1]. Hence an alphabet of twenty or thirty signs, eked out in some cases by diacritics (accents, diaeresis, etc.), is quite sufficient to express a language for all practical purposes. When, however, we begin to learn a foreign language, we find that many of the letters are used to represent sounds unknown to our own language. In other words, the Sound-Scheme (or Phonology) of English differs widely from that, for instance, of French, though the alphabets are practically identical. Thus, in order to speak and write a foreign language correctly, we must either hear it spoken or study accurate and scientific descriptions of its sounds.

Phonology of Modern Languages.

With dead languages it is a different matter. We have to gather their pronunciation from various data, and when all is done we cannot be quite certain that our results are true.

Of Dead Languages.

The Pronunciation of Latin and Greek has long been a vexed question. We shall not do more here than indicate the data of the problem and the most widely received results.

First, as to the data. These are as follows:

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[1] In educated English, without regarding the finer distinctions, about fifty.

(1) Descriptions and discussions of the sounds in the works of writers such as Dionysius of Halicarnassus (*fl.* 30 B.C.) and Varro (*fl.* 70 B.C.).

Data for investigating the pronunciation of Latin and Greek.

(2) Transliterations, especially of proper names, from and into other languages, e.g. Κικέρων, *Cyrus*, κῆνσος, σπεκουλάτωρ, *Athenae*, Φαρνάβαζος, Ἱερουσαλήμ, the Welsh *ciwdawd* (Latin *ciuitatem*), the Old English *bisceop* (ἐπίσκοπος through Latin *episcopus*) and *cirice*, our *church* (κυριακόν).

(3) Plays on words in literature, depending on similarity of sound, e.g. ὦ Βδεῦ δέσποτα for ὦ Ζεῦ, Com. Anon. 338 b, and *Cauneas* for *Caue ne eas*, Cic. *Div.* 2. 40. 84.

(4) The variations of orthography in inscriptions and papyri.

(5) The phonetic changes indicated by well-authenticated change of spelling during the 'lifetime' of the languages.

(6) The actual pronunciation of Modern Greek and the Romance Languages (Italian, Spanish, etc.).

(7) The representation in literature of the cries of animals, e.g. αὖ αὖ the bark of a dog in Ar. *Vesp.* 903, βῆ βῆ the bleat of a sheep in Cratinus Διόν. 5, and the cawing of a crow mistaken for *aue* in Phaedrus *Fab. App.* 2. 22.

Pronunciation of Attic Greek.

We shall now give a scheme of the probable pronunciation of Attic Greek in the 5th and 4th centuries B.C.

(i) CONSONANTS.

(1) Spirants:

Breathed—

σ: as in Eng. *sit*, not as in *rise* (rɐi̯z).

σσ:
ττ: } these are probably two spellings of one sound, perhaps like the Eng. *th* (þ) in *thin* doubled[1].

Voiced—

σ: before voiced consonants, e.g. *σβέννυμι*, *κόσμος*; cf. in Eng. *news* (nyūwz) but *newspaper* (nyūwspei̯pə).

ζ: *zd* as in Eng. *amaz'd* (not *dz* as in Eng. *kids*); cf. *'Αθήναζε* for *'Αθηνασ-δε*, and *διόζοτος* found in inscriptions for *διόσδοτος*[1].

(2) Stops:

Breathed—

κ:
τ: } as in Eng.
π:

Voiced—

γ: (1) as in Eng.; (2) under certain circumstances, e.g. *ὀλίγος*,—the velar spirant (ʒ) (Germ. *g* in *Lage*); but this was thought vulgar[2].

δ:
β: } as in Eng.

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[1] Another view is that the pronunciation of *σσ* or *ττ*, representing *κy-*, *τy-*, was *sh* (ṣ) and of *ζ*, representing *γý-*, *δy-*, *zh* (ẓ); cf. Eng. *nation* (nei̯ṣn̥) but *native* (nei̯tiv).

[2] In some of the oldest Egyptian Greek papyri *ὀλίγος* is written *ὀλίος*.

(3) The Aspirate:

ʻ: much as in Eng., but considerably weaker, like the second *h* in *hedgehog*.

(4) Aspirated Stops:

χ: k^h, roughly resembling *kh* in *inkhorn*.
θ: t^h, roughly resembling *th* in *athome*.
φ: p^h, roughly resembling *ph* in *uphold*.
See page 35.

(5) Nasals:

Breathed—

ν:
μ: probably (1) after Aspirated stops, e.g. *ἀριθμός* (aritmhos)[1], not (arit^{h}mos); *θνῄσκω* (tnhēi̯skɔ)[1], not (t^{h}nēi̯skɔ); and (2) before the Aspirate, e.g. *τὸν ἵππον* (tonh ippon).

Voiced—

γ: before γ, κ, and χ—as Eng. *ng*, *n*, in *sing*, *sink*.

ν: (1) initial and medial—as in Eng. (except in words like *sing*, *sink*).
(2) final—(except before a pause) assimilated in Place to the following consonant, e.g. *τὴν πόλιν* (tēm polin); *ὁ μὲν γέρων* (ho meŋ gerɔn) (so found in inscriptions, e.g. *ἐγ Κορίνθωι*).

μ: as in Eng.

---

[1] Breathed *m*, *n*, *l*, and *r* are generally spelt phonetically *mh*, *nh*, *lh*, and *rh*.

(6) Liquids:

λ: (1) Breathed after Aspirated Stops, e.g. φλοῖσβος (plhoi̯zbos)[1], not (p^{h}loi̯zbos).
(2) Voiced elsewhere as in Eng.

ρ: alveolar as in Eng., but trilled as in Lowland Scotch.
(1) Breathed initially and after Aspirated Stops and ρ, e.g. Ῥόδος[2] (Lat. *Rhodus*); χρόνος (krhonos)[1], not (k^{h}ronos); Πύρρος (pürrhos), (Lat. *Pyrrhus*).
(2) Voiced elsewhere as in Eng., e.g. Ἐρινύς (Lat. *Erinys*).

[ξ was *ks* and ψ *ps*, sometimes possibly *gz* and *bz*.]

(ii *a*) VOWELS.

α: short—as in Lowland Scotch *man*.
long—as in Eng. *father*.

ε: narrow; as in Fr. *été*.

η: as in Fr. *fête*, but wide (not as in Eng. *fate* or *feet*).

ι: short—narrow as in Fr. *fini* (not wide as in Eng. *pin*).
long—as in Eng. *see*, but narrow and without the final i̯.

ο: narrow; as in Fr. *beau* (not a diphthong as in Eng. *so*).

ω: wide (ɔ); somewhat as *o* in Eng. *not*, but lengthened (Eng. *aw* (ɔ) is narrow).

υ: (ü) short—as in Fr. *du pain*} (not as in Eng.
long—as in Fr. *pur*. } *tune* or *rune*).

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[1] Breathed *m*, *n*, *l*, and *r* are generally spelt phonetically *mh*, *nh*, *lh*, and *rh*.

[2] In inscriptions the rough breathing (ῥ) is said to occur only once.

(ii *b*) DIPHTHONGS.

αι: somewhat as in Eng. *line*, but (ai̯) rather than (ɐi̯).

ει: (1) when the result of contraction of *ε-ε* or 'compensatory lengthening[1],' e.g. *φιλεῖτε* for *φιλέετε*, *λύειν* for *λύεεν*, *τιθείς* for *τιθέ(ντ)ς*, *ἔμεινα* for *ἔμεν(σ)α*,—probably as *η* (see above).

(2) 'true' diphthong, i.e. (ei̯) as *λείπω*,—much as in Eng. *hay*, but narrow.

οι: somewhat as in Eng. *coin* (see *ο*), e.g. *τὸ ἱμάτιον* became *θοἰμάτιον*.

υι: this does not occur in Attic inscriptions of the 4th cent. B.C. (e.g. *υἱός* is written *ὑός*, *'Ωρείθυια 'Ωρειθῦα*, *κατεαγυῖα κατεαγῦα*) but has crept into our Classical texts owing to Hellenistic influence. In the 5th cent. the *ι* must have been pronounced very weakly if at all. In the non-Attic dialects, on the other hand, it persisted, but in them it was a diphthong only in the wider sense (see p. 33), being (u̯i) rather than (ui̯), the *u* consonantal as in Fr. *lui*. Our pronunciation, making *υ* the consonant, is correct only for the non-Attic dialects.

ᾳ: ⎫ these were in ancient times generally written
ῃ: ⎬ *αι*, *ηι*, *ωι*. In inscriptions and papyri the
ῳ: ⎭ *ι* is often omitted altogether; the *ι*-sound

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[1] i.e. when a short vowel originally long 'by position' becomes long 'by nature' (or in certain cases diphthongised) on the disappearance of the consonant which originally made it long.

was very weak, and probably had ceased to be pronounced by the 2nd cent. B.C. Our present way of writing the ι underneath (subscript) came in only about the 12th cent. A.D.

αυ: as in Eng. *cow*.

ευ: somewhat as in Cockney *heaow* for *how*, i.e. (eu̯) (not as *u* in *use*).

ηυ: original (ēu̯) soon became identical with ευ, and after the 4th century verbs beginning with ευ were spelt without the augment.

ου: (1) when the result of contraction or 'compensatory lengthening,' e.g. δηλοῦτε for δηλόετε, λόγου for λογό(σι)ο, διδούς for διδό(ντ)ς, βουλή for βολ(ϝ)ή,—a pure (u)-sound as in Fr. *cou* (not as in Eng. *cow*).

(2) 'true' diphthong, i.e. (ou̯), as in οὐχ, οὗτος, σπουδή,—much as in Eng. *so*, but narrow.

ωυ: original (ōu̯) scarcely occurs in Attic (πρωυδᾶν, however, for προαυδᾶν), and soon became identical with ου; hence the contraction of καὶ οὐ is written κοὐ not κωὐ.

The pronunciation of Latin by educated people of the Augustan period was probably as follows:

Pronunciation of Latin.

(i) CONSONANTS.

(1) Spirants:

Breathed—

s: as in Eng. *sit* (not as in Eng. *rise*).

f: labiodental as in Eng.; earlier bilabial.

Voiced—

[*s* (z): as in Eng. *rise*; only in the early period between vowels; it soon changed to *r*, e.g. *labōsem* became *labōrem*.]

v[1] (w): weak as in Fr. *ouest;* not so strong as Eng. *w* in *west*.

j[2] (i̯): *y* as in Eng. *yard*.

(2) Stops:

Breathed—

c: as Eng. *k* (never as Eng. *s*).

t: dental as in Fr. and Germ. (not alveolar as in Eng.[3]).

p: as in Eng.

Voiced—

g: as in Eng. *game* (never as in Eng. *gem*).

d: dental (see *t*).

b: as in Eng., but unvoiced before *s* and *t*, e.g. *urbs* (urps), *obtineo* (optineō).

(3) The Aspirate:

h: weaker than initial *h* in Eng.; like the second *h* in *hedgehog*.

(4) Nasals:

n: (1) before *c*, *g*, *q*,—(ŋ) as in Eng. *sink*, *single*.
(2) before other Consonants (except *n*)—nasalised (identical with *m*, see below).
(3) elsewhere as in Eng.

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[1] Written *u* in the Augustan period and in most modern texts.

[2] Written *i* in the Augustan period and in most modern texts.

[3] See footnote to p. 23.

m: (1) medial and final before most Consonants, and final before Vowels and *h*[1]—nasalised as in Fr. *empéreur*, except
- i. before *m*, when it remained unchanged.
- ii. before *n*, *l*, and *r*, when it was assimilated, e.g. *cum nobis* (kun nōbīs), *cum regibus* (kur rēgibus), *tam leuis* (tal lewis).
- iii. before *c*, *g*, and *q*, when it became (ɒ), e.g. *cum quattuor* (kuɒ qwattuor).

(2) elsewhere as in Eng.

(5) Liquids:

l: dental (not alveolar as in Eng.).
r: voiced alveolar as in Eng., but trilled as in Lowland Scotch.

[*x* was *ks*; *z*, *th*, *ph*, *ch*, and *rh* were used only in Greek words, and had the Greek values, save that the last four were pronounced *t*, *p*, *c*, and *r* by the uneducated.]

(ii *a*) VOWELS.

a: short,—as in Lowland Scotch *man*.
long,—as in Eng. *father*.
e: short,—wide, as in Eng. *men*.
long,—narrow, as in Fr. *fête*.
i: short,—as in Eng. *pin*.
long,—as in Eng. *see*, but narrow and without the final *i̯*.
o: short,—wide, as in Eng. *not*.
long,—narrow, as in Fr. *beau*.

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[1] Hence the elision of *-am*, *-em*, etc., in poetry.

u: short,—
  (1) as in Eng. *full.*
  (2) in *optimus* or *optumus* and similar words, like Fr. *u* (ü) in *du pain.*
  long,—as in Fr. *cou,* Eng. *rune* (not as in Eng. *tune*).

[*y* was used for *υ* (ü) in Greek words, e.g. *lyra, gȳrus,* and only appeared in true Latin words[1] in later times, e.g. *sylva, Sylla.*]

(ii *b*) DIPHTHONGS.

ae: first like (ai̯) (as spelt till 100 B.C.), then it gradually approximated to (ē), becoming identical in the 5th century A.D. (hence in medieval ecclesiastical Latin such forms as *ecclesie* for *ecclesiae*). In the Augustan period *ae* was probably pronounced (æe), i.e. the vowel of *man* followed by that of *men.*

oe: first like (oi̯) (as spelt till 100 B.C.), then it gradually approximated to (ū) as in Fr. *cou.* In the Augustan period it was probably pronounced (öe), i.e. *eu* in Fr. *peu* followed by *e* in Eng. *men.*

ui: only a diphthong in the wider sense (see p. 33), being (u̯i) rather than (ui̯); in *huic* and *cui* it was probably pronounced as in Fr. *lui.*

au: first like (au̯) (as in Eng. *cow*), then it gradually approximated to narrow *o* (as in Fr. *beau*). Thus *Clodius* was only another spelling of *Claudius*. In the Augustan period *au* was probably pronounced (ɔu̯), i.e. *aw* in *law* followed by the *u* in *full*.

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[1] Except in a few cases of words wrongly thought to be derived from Greek, e.g. *lacryma, inclytus.*

eu: (1) the 'true' diphthong disappeared very early, (2) the 'spurious' occurs in contractions such as *neu* for *neue* (newe). It was probably pronounced somewhat as in the Cockney *heaow* for *how*, i.e. (eu̯) (not as *u* in Eng. *use*).

For contrasts between Greek and Latin pronunciation, see:—

Some contrasts.

μ, ν and *m*, *n*,
ρ and *r*,
ε, η and *e*,
ο, ω and *o*,
υ, ου and *u*,
αυ and *au*.

Contrasting Greek with English we should note:—

χ, θ, φ,
ρ,
ε, η,
ο, ω
υ, ου,

and the diphthongs generally, as well as the absence in Greek of:—

f, *v*,
w,

and *j* and 'soft' *g* (in *judge*), and *ch* (in *church*).

Contrasting Latin with English we notice:—

c,
t,
v (*u* consonant),
-an-, *-en-*, *-am*, *-em*, etc. nasalised,

and the absence of (z) (*s* in *rise*), and of *j* and 'soft' *g* (in *judge*), and *ch* (in *church*).

Double Consonants.

It should be added that, unlike English, Greek and Latin always pronounced double consonants double, e.g. in *λάκκος* and *penna* the *k*-sound and the *n*-sound formed part of both syllables, i.e. *λάκ-κος*, *pen-na*, not *λάκ-ος*, *pen-a*. English has parallels only in compounds, e.g. *book-case* (bukkei̯s), *penknife* (pennɐi̯f), *midday* (middei̯).

Examples of Greek and Latin pronunciation.

We shall now give extracts from Plato and Cicero, first in the phonetic spelling used to represent sounds throughout this book[1], and then in the ordinary spelling of our texts. It should be remembered, however, that the phonetic spelling is imperfect, and that, particularly in the case of the vowels, the use of the same sign in Greek, Latin, and English, does not necessarily mean that the sounds thus indicated were absolutely identical (see the descriptions of the sounds above).

Extracts from Plato transcribed phonetically.

Phonetically.

(i) eu̯tʰüs ou̯m m idɔnh o kepʰalos ēspazdeto te kai̯ ei̯pen, ɔ sɔkrates, ou̯de tʰamizdēs hēmīɐ katabai̯nɔn ēs tom pei̯rai̯ā: krhēm mentoi̯. ei̯ meɐ gar egɔ eti en dünamei̯ ēn tū rhāi̯diɔs poreu̯estʰai̯ pros to astü ou̯den an s edei̯ deu̯r ienai̯, allh ēmei̯s am para se ēi̯men: nǖn de se krhē püknoteron deu̯r ienai̯: hɔs eu̯ istʰ oti emoi̯ge, hosonh ai̯ kata to sɔmh ēdonai̯ apomarai̯nontai̯, tosou̯ton au̯ksontai̯ hai̯ peri tūs logūs epitʰǖmiai̯ te kai̯ hēdonai̯......

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[1] Based on the 'Broad Romic Notation' used by Sweet in his *Primer of Phonetics*.

(ii) egɔ d agapɔ, eām mē elaþþɔ[1] katalipɔ tou̯toi̯sī, alla brak^{h}ei̯ ge tini plei̯ɔ ē parelabon......

(iii) alla moi̯ eti tosond ei̯pe: ti megiston oi̯ei̯ agat^{h}on apolelau̯kenai̯ tū pollēn ūsiāŋ kektēst^{h}ai̯? ho, ē d^{h} os, isɔs ou̯k am pollūs pei̯sai̯mi legɔn. eu̯ gar ist^{h}, ep^{h}ē, ɔ sɔkrates, hoti epei̯dān tis eŋgüs ēi̯ tū oi̯est^{h}ai̯ teleu̯tēsēn, ēserkhetai̯ au̯tɔi̯ deos kai̯ prhontis peri hɔn emprost^{h}en ou̯k ēsēi̯ei̯.

In the spelling of our texts.

(i) *εὐθὺς οὖν με ἰδὼν ὁ* Κέφαλος *ἠσπάζετό τε καὶ εἶπεν,* ᾿Ω Σώκρατες, *οὐδὲ θαμίζεις ἡμῖν καταβαίνων εἰς τὸν* Πειραιᾶ· *χρῆν μέντοι. εἰ μὲν γὰρ ἐγὼ ἔτι ἐν δυνάμει ἦν τοῦ ῥᾳδίως πορεύεσθαι πρὸς τὸ ἄστυ, οὐδὲν ἂν σε ἔδει δεῦρο ἰέναι, ἀλλ' ἡμεῖς ἂν παρὰ σὲ ᾖμεν· νῦν δέ σε χρὴ πυκνότερον δεῦρο ἰέναι· ὡς εὖ ἴσθι ὅτι ἔμοιγε, ὅσον αἱ κατὰ τὸ σῶμα ἡδοναὶ ἀπομαραίνονται, τοσοῦτον αὔξονται αἱ περὶ τοὺς λόγους ἐπιθυμίαι τε καὶ ἡδοναί......*

(ii) *ἐγὼ δὲ ἀγαπῶ, ἐὰν μὴ ἔλάττω καταλίπω τουτοισί, ἀλλὰ βραχεῖ γέ τινι πλείω ἢ παρέλαβον......*

(iii) *ἀλλά μοι ἔτι τοσόνδε εἰπέ· τί μέγιστον οἴει ἀγαθὸν ἀπολελαυκέναι τοῦ πολλὴν οὐσίαν κεκτῆσθαι;* ῝Ο, *ἦ δ' ὃς, ἴσως οὐκ ἂν πολλοὺς πείσαιμι λέγων. εὖ γὰρ ἴσθι, ἔφη, ὦ* Σώκρατες, *ὅτι, ἐπειδάν τις ἐγγὺς ᾖ τοῦ οἴεσθαι τελευτήσειν, εἰσέρχεται αὐτῷ δέος καὶ φροντὶς περὶ ὧν ἔμπροσθεν οὐκ εἰσῄει.*

PLATO, *Rep.* I. 328 C, 330 B, 330 D.

In reading the following phonetic transcription of an extract from Cicero it should be understood that the 'intrinsic' length of vowels long 'by position' cannot be completely determined, though in some cases, e.g. a vowel before *ns* or *nf*, the statements of the ancient authorities are explicit.

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[1] *Or* elaṣɔ (see p. 47).

Extract from Cicero transcribed phonetically.

Phonetically.

qwod prekātus ā dīs immortālibus suᵊ, yūdikēs, mōr īᵊstitūtōqwe māyōruᵊ illō diē qw au̯spikātō komitiīs keᵊturiātīs lūkium mūrēnaə kōᵊsuler renuᵊtiāwī, ut ea rēs mī, fidēī magistṛātuīqwe meō, populō plēbīqwe rōmānæe ben atqwe fēlīkiter ēwēnīret, ideᵊ prekor ab īsdeᵊ dīs immortālibus ob ēyusdeᵊ hominis kōᵊsulātuᵊ ūnā kuᵊ salūt optineᵊduᵊ, et ut westræe meᵊtēs atqwe seᵊteᵊtiæe kuᵊ populī rōmānī woluᵊtātibus suffrāgiīsqwe kōᵊseᵊtiaᵊt eaqwe rēs wōbīs populōqwe rōmānō pākeᵊ trāəqwillitāteᵊ ōtiuə kōəkordiaəqwe afferat ...qwæe kuᵊ ita siᵊt, yūdikēs, et kuᵊ omnis deōruᵊ immortāliuᵊ potestās au̯t trāᵊslāta sit ad wōs au̯t kerte kommūnikāta wōbīskuᵊ, īdeə kōᵊsuleᵊ westræe fidēī kommeᵊdat, qwī aᵊteā dīs immortālibus kommeᵊdāwit, ut ēyusdeᵊ hominis wōke et dēklārātus kōᵊsul et dēfēᵊsus benefikiuᵊ populī rōmānī kuᵊ westr atqw omniuə kīwiuᵊ salūte tueātur.......

In the spelling of our texts.

Quod precatus a dis immortalibus sum, iudices, more institutoque maiorum illo die, quo auspicato comitiis centuriatis L. Murenam consulem renuntiaui, ut ea res mihi, fidei magistratuique meo, populo plebique Romanae bene atque feliciter eueniret, idem precor ab isdem dis immortalibus ob eiusdem hominis consulatum una cum salute obtinendum, et ut uestrae mentes atque sententiae cum populi Romani uoluntatibus suffragiisque consentiant eaque res uobis populoque Romano pacem, tranquillitatem, otium, concordiamque adferat...quae cum ita sint, iudices, et cum omnis deorum immortalium potestas aut translata sit ad uos aut certe communicata uobiscum, idem consulem uestrae fidei commendat, qui antea dis immortalibus com-

mendauit, ut eiusdem hominis uoce et declaratus consul et defensus beneficium populi Romani cum uestra atque omnium ciuium salute tueatur.

CICERO, *pro Mur.* I. 1, 2.

English spelling.

Identical sounds variously spelt.

In dealing with Greek and Latin we take the written language first, and from it deduce the pronunciation; in the case of our own language we take the actual sounds first, and think of the written language as merely representing those sounds. On comparing the English signs with the sounds they represent, we are at once struck by the enormous number of anomalies. For instance, we represent the sounds

(au̯) by *ou* (*out*), *ough* (*plough*), *ow* (*how*);
(ɐi̯) by *i* (*line*), *eigh* (*height*), *igh* (*high*), *y* (*by*), *ye* (*rye*);
(ei̯) by *a* (*rate*), *ai* (*rail*), *ay* (*hay*), *eigh* (*weigh*), *ey* (*whey*);
(k) by *k* (*kill*), *c* (*cat*), *ck* (*stick*), *ch* (*stomach*), *que* (*barque*);
(n̥) by *en* (*token*), *on* (*person*), *and* (*bread-and-butter*).

Identical spellings variously pronounced.

Similarly, identical spellings are variously pronounced, e.g.

use (noun) and *use* (verb),
freight and *sleight*,
vase and *case*,
room and *wood*,
war and *tar*.

Causes of anomalies.

Such anomalies doubtless occur in every alphabet, and are due to various causes. The chief cause is that language is always changing naturally, while an alphabet can only be changed artificially. Hence, in order to represent the sounds of a language accurately, the signs have to be reformed from time to time. Where the knowledge of letters is confined to a comparatively small part of a community, such reforms are easily made by agreement among the users of them. Where however, as in our own case, by far the larger number of the speakers of the language can read and write, any wide reform, even if it could be agreed to among the learned, would lead to great confusion among the half-educated masses. Another difficulty in the way of revising the spelling of a language spoken over a wide area, would be local varieties of pronunciation. A simple word like *warm* is pronounced differently in the West of England, the Midlands, and the North. If the new spelling had to satisfy the phonetic needs of America and Australia, the difficulty from this cause would be still greater. Small reforms will doubtless be introduced from time to time, such as the dropping of superfluous letters, e.g. in *develope, programme*, but it is extremely unlikely that any drastic reform of English spelling will take place under the present conditions.

Difficulties of reforming spelling.

We give a specimen of English in the phonetic spelling used above.

Extract from O. W. Holmes transcribed phonetically.

wel—ɐi̭ kānt bi sævidẓ wiđ yū fə wontiɵ tə lāf[1], n̥d ɐi̭ lɐi̭k tə mei̭k yū lāf, wel ənɐf, when[2] ɐi̭ kæn. bət đen əbzə̄v đis: if đə sens əv đə ridikyələs iz wɐn sɐi̭d əv n̥ impresəbl̥ nei̭tṣə, its veri wel; bət if đæts ɔl đeər[3] iz in ə mæn, hīi̭d betər əv bīi̭n[4] n̥ ei̭p ət wɐns, n̥d sōṷ əv stud ət đə hed əv iz prəfeṣn̥. lāfter n̥ tiəz ə ment tə tə̄n đə whīi̯lz[1] əv đə sei̯m məṣīi̯nəri əv sensəbiləti[2]; wɐnz wind-pau̯ər n̥ đi ɐđə wɔtə-pau̯ə: đæts ɔl. ai̯v ɔfn̥ hə̄d đə prəfesə tɔk əbau̯t histeriks z̥ bīi̯iɐ nei̯tṣəz klevərist iləstrei̯ṣn̥ əv đə rəsiprəkl̥ kn̥və̄təbiləti[2] əv đə tūw stei̯ts əv whitṣ[1] đīi̯z ækts ə đə mænifestei̯ṣn̥z; bət yūw[3] məi̯ sīi̯ it evri dei̯ in tṣildrn̥; n̥d if yū wont tə tṣōu̯k wiđ stɐi̯fl̥d tiəz ət sɐi̯t əv đə trænsiẓn̥[4], z̥ it ṣōu̯z itself in ōu̯ldə yiəz, gōu̯ n̥ sīi̯ mistə blei̯kˈplei̯ dẓesi rɔrl̥.

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[1] N. educated Eng. 'læf.'

[2] S. educated Eng. often 'wen.'

[3] Or (with less stress) 'đər.'

[4] Or 'bin.'

The passage stands thus in the ordinary spelling:

'Well—I can't be savage with you for wanting to laugh, and I like to make you laugh, well enough, when I can. But then observe this: if the sense of the ridiculous is one side of an impressible nature, it is very well; but if that is all there is in a man, he had better have been an ape at once, and so have stood at the head of his profession. Laughter and tears are meant to turn the wheels of the same machinery of sensibility; one is wind-power and the other water-power: that is all. I have often heard the Professor talk about hysterics as being Nature's cleverest illustration of the reciprocal convertibility of the two states of which these acts are the manifestations; but you may see it every day in children; and if you want to choke with stifled tears at sight of the transition, as it shows itself in older years, go and see Mr Blake play *Jesse Rural.*'

O. W. HOLMES, *The Autocrat of the Breakfast Table*, IV.

The remainder of the Chapter will be devoted to a sketch of the History of our Alphabet.

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[1] S. educated Eng. often 'wīi̯lz,' 'witṣ.'

[2] Or 'sensibiləti,' 'kn̥və̄tibiləti.'

[3] This word varies between 'yū' and 'yūw' according to the stress.

[4] S. educated Eng. often 'trānsiẓn̥.'

History of our Alphabet.

Just as it used to be thought that language was put into man's mouth ready-made by the Creator, so the Alphabet was believed to have been the deliberate invention of a single man. It is now known that it has been evolved from just as primitive beginnings as speech.

Memory-Aids.

Nearly all savages use some system of Memory-Aids, i.e. some tangible object is kept as a record, or sent as a message. Herodotus (iv. 98) tells us how when Darius crossed the Danube to invade Scythia, he gave to the Ionians whom he left to guard his bridge of boats a thong in which he had tied sixty knots. They were to untie a knot each day, and if when they were all untied he had not returned they were to sail away to their own lands[1]. Among the ancient Peruvians the knotted-thong system of aiding the memory was elaborately developed. Their *quipu* was a system of strings, consisting of a main cord, to which were attached at given distances thinner cords of different colours, each knotted in a particular way. Red strings stood for soldiers, yellow for gold, white for silver, and so on, while a single knot meant ten, a double knot a hundred, etc. A similar system is still in use in Peru for registering cattle. Comparatively recently, sums of money lent to the British Government were recorded on Tally-sticks, i.e. notched sticks split down the middle, of which one half was kept in the Exchequer and the other by the lender of the money. The word *indenture*, meaning a kind of agreement, is due to a similar custom, duplicate deeds being cut with notched edges to fit one another. The custom of dividing a bone

Tally-sticks.

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[1] The familiar 'knot in the handkerchief' is a modern parallel.

σύμβολα and *tesserae.*

or coin between two parties to a covenant was well known in Greece and Rome. Cf. Hdt. vi. 86, Eur. *Med.* 613, and the following from the Comic Fragments:

> *διαπεπρισμένα*
> *ἡμίσε' ἀκριβῶς ὡσπερεὶ τὰ σύμβολα.*
> (Eubul. *Ξοῦθ.* 1.)

The Latin equivalent for *σύμβολον* was *tessera*, which was used for the tablet employed for making known the watchword to the Roman troops, as well as in the narrower sense of a tally, or token of covenant, particularly between friends and their descendants. Cf. Liv. 7. 35. 1, and the following from Plautus:

> A. Ego sum ipsus quem tu quaeris...
> B. Si ita est, tesseram conferre si uis hospitalem.
> (*Poen.* 5. 2. 87.)

Robinson Crusoe uses the primitive type of Almanac when he cuts small notches for weekdays and large ones for Sundays.

Message-sticks.

For examples of the Message-stick it is not necessary to go to the savages of Australia or Africa. The Spartan *σκυτάλη* was doubtless a development of this. The 'fiery-cross,' once used for gathering the Highland clans, is well-known. In the Old Testament (1 Sam. xi. 7) Saul slaughters a yoke of oxen and sends round pieces of them to serve the same purpose. In the Middle Ages it was customary to send a signet-ring with the bearer of an important message, as a token of his *bona fides.*

Pictograms.

The next step in the development of the Alphabet was the Pictorial stage, in which a picture of a thing is given, to express the thing first actually and then metaphorically. This system is seen

Civilised survivals.

combined with the last on the grave-posts of Red Indians. For instance, so many strokes on the right of the dead man's totem (e.g. a tortoise, or a crane, the sign of his clan) indicate the number of big battles in which he fought, so many marks on the left the number of treaties of peace to which he was a party; a pipe denotes peace, and a hatchet war. Treaties between the United States and the Indians and between Great Britain and the Maoris, dating from the middle of the nineteenth century, are drawn up in similar style. A survival of the Pictogram is the modern map, especially those of a century or two ago, where instead of a round spot a picture of buildings is given to represent a town. We may compare the crossed swords used to denote the site of a battle, the signboards of old inns, the signs for the pieces in newspaper chess-problems, the planet-signs in almanacs, and the symbol + used for Charing Cross, King's Cross, etc.

Ideograms.

Aztec writing.

Shading insensibly into the Pictographic stage is that of Ideograms. From the picture representing a thing either actually or by an easily intelligible metaphor, writing advanced to denoting things by mere emblems or symbols whose connexion with the things denoted is a matter of teaching or experience. Such symbols in use with us are & denoting 'and,' + to show addition, − subtraction, = 'equals.' Ideograms are found in the remains of the Aztec writings of Mexico, combined with the more obvious pictogram. Thus a piece of bread protruding from a mouth denotes eating; the symbol for water, placed between the lips, denotes drinking; the extended arms, a negation; while the names of persons and places are represented by symbolic figures, e.g. 'Grasshopper Hill' by a hill and a grasshopper. In the same writings a nearer approach to the Phonetic stage is seen, namely the picture-pun or *rebus*, which is still used among ourselves as a puzzle or guessing-game, e.g. an eye, a saw, a boy, a swallow, a goose, a berry, standing for the sentence 'I saw a boy swallow a gooseberry'[1].

The Rebus.

The Phonetic stage is reached when a certain symbol is used to denote a certain sound-group *whatever its meaning*. The earlier forms of the Chinese alphabet (the language is Monosyllabic) contain examples of all the above stages. Thus 'sun' is a circle, 'moon' a crescent (Pictograms); 'strife' two women, 'hermit' a man and a mountain (Ideograms); while *chow* means among other things 'ship,' so that a picture of a ship stands for the sound-group *chow* under all circumstances (Phonogram), modifiers or key-signs being added to show which *chow* is meant, e.g. a ship plus the sign for 'water' means 'ripple,' plus the sign for 'speech' means 'loquacity[2].'

Phonograms.

Early Chinese examples.

European languages are Polysyllabic. Hence the Alphabet as we know it in Europe has gone a step farther. In the Alphabetic stage, not each sound-group, but (roughly speaking) each *sound*, whether vowel or consonant, has its particular symbol.

True Alphabet.

Though the theory that our Alphabet is derived from the Egyptian writing is no longer held, we shall now give some account—as illustrating the development of all alphabets—of the

Egyptian scripts.

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[1] Clodd, *Story of the Alphabet*.

[2] In later Chinese writing the picture-letters have been so far modified as to be generally unrecognisable as such.

Hieroglyphics. The Egyptians used *some* true alphabet-signs as early as 5000 years B.C., but never attained to an entire system of them. The majority of the signs of their script remained pictorial. Egyptian writing is of three kinds, Hieroglyphic, Hieratic, and Demotic. Demotic was a modification of Hieratic, and Hieratic of Hieroglyphic.

(1) The Hieroglyphs (1700 in number) contain pictograms, ideograms, and phonograms, and date from at least 4777 B.C., which is the year assigned by Professor Flinders Petrie to the foundation of the First Dynasty by Menes. The Hieroglyphs were too clumsy for writing purposes and became practically restricted to monuments.

(2) The Hieratic characters were an abridged form, better suited to the pen or brush of reed used by the priests for writing on the papyrus. In fact, they formed a *cursive* script. The earliest papyrus we possess dates from about 3600 B.C.

(3) The Demotic characters came into use much later, about 900 B.C. They are a still simpler form of the Hieroglyphic, used, as their name implies, by the people as opposed to the priests, i.e. they were the ordinary writing of daily life.

Rosetta Stone.

In the time of the Ptolemies (320–40 B.C.) it was customary to make known matters of public importance in Hieroglyphic, Demotic, and Greek. This is the case with the famous Rosetta Stone. This slab, now in the British Museum, proved the key to the interpretation of the Egyptian writing.

The Phoenicians.

Antiquity is almost unanimous in ascribing the introduction of the Alphabet into Greece to the Phoenicians. A comparison of the Greek names of the letters *ἄλφα*, *βῆτα*, etc., with the Hebrew names (given in the Bible version of the 119th Psalm) shows at once the connexion between the Greek and Semitic scripts. Now in Hebrew the names of the letters have a meaning, in Greek they have none. *Aleph* means 'ox,' *Beth* 'house,' *Gimel* 'camel,' and so on. This is only one of the facts which, combined with the ancient testimony, would seem to justify us in assuming that the Greek Alphabet came from the Phoenicians. Assuming for the moment that this was so, the next question is, whence did the Phoenicians get it? Classical tradition points to Egypt. We know that the Phoenicians were the great traders of the Mediterranean world from the time of Hiram and Solomon (1030 B.C.) to the time of Hannibal and the Scipios. To a nation of trading instincts a workable alphabet is almost a necessity, and the connexion of the Phoenicians with Egypt is undoubted. From 1600 to 1300 B.C. their country was a dependency of the Pharaohs, and in 1250 B.C. there was a Tyrian quarter of Memphis.

Their connexion with Egypt.

Till recent years the view was widely held that the Greek Alphabet came from the Phoenician, and the Phoenician from the Hieratic. Discoveries in the Aegean, however, and especially in Crete, carrying the Mycenean or Aegean culture back to the third millennium B.C., have made it necessary to revise this theory. Professor Flinders Petrie now declares the history of the Alphabet to be as old as civilisation. According to him a great signary or sign-system (not a true Alphabet[1]) was in use all over the Mediterranean in 5000 B.C. This

The origin of our Alphabet.

Mediterranean signary.

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[1] The different forms of the symbols can be counted by hundreds.

system was developed variously in different countries. It was contemporary with the Hittite writings and the Egyptian Hieroglyphs. For many centuries it remained in the pre-alphabetic stage, a system of signs with more or less recognised meanings in different localities, but no more. The change of attributing a letter-value to each sign was probably the outcome of Phoenician commerce. When the Dorian Migrations (1100 B.C.?) swept away the Mycenean civilisation, the Phoenicians quickly seized the opportunity of extending their trade throughout Greece, and established depôts in the ports of the Aegean. Thus those particular versions of the great Mediterranean sign-system which had been current in Greece in Mycenean times became, as it were, condensed, simplified, and unified by the needs of commerce.

Simplified by trade.

Just as the successive invasions of England by peoples speaking a foreign language have cleared our language of superfluous inflexions and awkward ambiguities, so the trade fostered by the Phoenicians, by bringing together users of different varieties of the Mediterranean system, tended to clear the system of superfluous signs and of symbols which were peculiar in form or value to any one district.

Use as Numerals and Trade-marks.

It is probable that the Phoenicians used the Mediterranean signs at first for numerals and trade-marks. The Greek Alphabet of later times, as is well known, was employed as a numeral-system, and in the time of Aristophanes Corinthian horses were branded with a Koppa, ϙ, the initial letter of Κόρινθος in the alphabet employed at Corinth in early times. Anyhow, the old sign-system of a hundred or more symbols, under the unifying influence of trade became an Alphabet of twenty-two or twenty-three letters, varying, it is true, in shape and value according to the locality, but each representing a single sound.

Baal Lebanon.

Moabite Stone.

The oldest examples of this Alphabet are the inscriptions on fragments of a bronze bowl discovered in Cyprus, which bears an inscription dedicating it to Baal Lebanon, dating from before 1000 B.C., and the famous Moabite Stone, set up about 890 B.C. by Mesha king of Moab to commemorate his rebellion against Israel.

Other Alphabets of the same origin.

The Greek Alphabet was not the only script which sprang from this source. Hebrew, Syriac, Arabic, the Indian languages, Bengali, Gujarati, Tamil, etc., as well as those of Burma, Ceylon, Korea, and Siam—these are only a few of the languages which owe their alphabets, if not to the Phoenicians, at any rate to the great Mediterranean sign-system which the Phoenicians adopted and systematised.

Earliest Greek inscriptions.

F

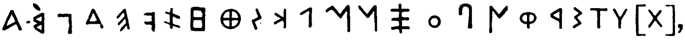
As the trading Alphabet spread throughout Greece and became adopted for general purposes of record and communication, the Greeks found that some of the letters were not wanted in their language, while some of their native sounds were unrepresented. Thus we find in the earliest extant Greek inscriptions excavated at Athens and Corinth and in the island of Thera (750 ?—600 B.C.) that the superfluous consonant-symbols 'aleph,' 'he,' 'yod,' and 'ayin'—to give them their Hebrew names—are used for the vowels *a*, *e*, *i*, and *o*, which were not written in Phoenician and Hebrew. F, Digamma or Vau (i.e. consonantal *u*, pronounced *w*), which is necessary to the scansion of the Homeric poems (9th century B.C.?), was still required, as is shown by the invention of a new symbol for its vowel-equivalent *u*, namely Y or V. The original order of the letters remained the same, and upsilon was placed at the end.

Y

The earliest Greek inscription (found at Athens) also contains X with the value χ. This was probably adopted from the non-Hellenic Carian alphabet, in which it has the value *h*. But in most of the extant inscriptions dating from before 600 B.C. the Palatal Aspirate is represented by K H (*κh*) and the Labial Aspirate by Γ H (*πh*), while though ≢ (ξ) represents *κσ*, a separate symbol is not thought necessary for *πσ* or *πhσ*. The following, *allowing for many local variations in shape and position*, may be taken as a rough representation of the Greek Alphabet down to about 600 B.C.:

X

Alphabet of 750—600 B.C.



with the values

a β γ δ ϵ-η ϝ ζ (*h*) θ ι κ λ μ ν ξ o-ω π Ϻ (*q*) ρ σ τ υ [χ].

It should be noticed that—

one symbol does duty for ϵ and η,

one symbol does duty for *o* and ω,

ϝ, digamma (*w*) is still in use,

⊟, which in the form H was afterwards used for η, is here used for the rough breathing,

after π we have Ϻ (or M, as it appears in some inscriptions), probably corresponding to the Hebrew 'shin' or *sh* (ṣ); this letter survived as a numeral, 900;

ϙ, koppa (*q*), is still used for κ before *o* and *υ*,

ϕ and ψ, and, generally speaking, χ, are absent,

these early inscriptions are *retrograde*, i.e. written from right to left (cf. the forms of β, ϵ, above); before our left-to-right system prevailed people also wrote *βουστροφηδόν* ('winding as one ploughs with oxen'), i.e. opposite ways in alternate lines. In this style were written the laws of Solon (594 B.C.) and some of the Abu-Simbel inscriptions (590)[1]. Hebrew is still written from right to left, while Chinese goes vertically.

After about 600 B.C. the sign X becomes general, and the new symbols Φ and Ψ (probably adopted like X from the Carian alphabet) begin to occur.

Western, Eastern, and Attic Groups.

The local variations found existing at this epoch are generally arranged in three groups, Western and Eastern, and an intermediate group to which Attic belongs. The distinction lies in the different values and order of Ξ, X, Φ, and Ψ.

Western Comprising most of Greece Proper and the Western Colonies	**Attic** Comprising Attica, Aegina, and the Northern states of the Peloponnese	**Eastern** Comprising the Aegean and the cities of Asia Minor
	XΣ = ξ	
Ξ in the form ⊞[2]	[Ξ not used]	Ξ = ξ
X (or +) = ξ	X = χ	X = χ
Φ = φ	Φ = φ	Φ = φ
ΦΣ = ψ	ΦΣ = ψ	
Ψ = χ	[Ψ not used in Attica and Aegina]	Ψ = ψ
order X, Φ, Ψ	order Φ, X	order Φ, X, Ψ

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[1] See below.

[2] Only as a superfluous letter.

It will be noticed that the value of ϕ is the same throughout, and that the Attic Group approximates to the Eastern.

The Western Group will be discussed later in connexion with the Italic Alphabets which are descended from it.

Eastern.
Abu-Simbel.

Of the Eastern Group (called also the Ionic Alphabet) the most important documents after the early examples from Thera mentioned above, are the famous inscriptions of Abu-Simbel. These were carved by Greek mercenaries of the Egyptian king Psammetichus II. (594—589 B.C.) on the legs of two colossal figures which are seated before the temple of Abu-Simbel in Nubia. The longest of these inscriptions is shown upon the opposite page, and may be transcribed as follows:

βασιλεος ελθοντος ες Ελεφαντιναν Ψαματιχο
ταυτα εγραψαν τοι συν Ψαμματιχοι τοι Θεοκλος
επλεον ηλθον δε Κερκιος κατυπερθε ʽυις ο ποταμος
ανιη αλογλοσος δ ηχε Ποτασιμτο Αιγυπτιος δε Αμασις
εγραφε δ αμε Αρχον Αμοιβιχο και Πελεϙος Ουδαμο

As usual in Greek inscriptions prior to the Roman period, the words are not spaced. Comparing this inscription with the older Alphabet given above, we may notice—

the absence of ϝ in *βασιλε[ϝ]ος*,

the use of ⊟ for *η*[1], and a dash (ʹ) for the rough breathing in *ʽυις*,

the use of *ϕ* and *ψ*.

Comparing later Greek we see—

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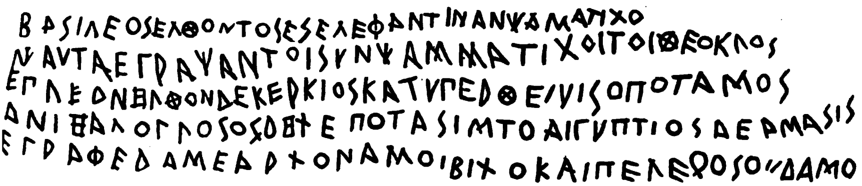
[1] This use of ⊟ or H was probably suggested by the name of the letter, which by the loss of the aspirate (now ceasing to be pronounced in Ionic) passed from Heta to Eta.

the use of *ο* for *ου* and *ω* (*Ψαματιχο*[*υ*], *Θεοκλο*[*υ*]*ς*, and *αλογλοσος* for *αλλογλωσσους*),

the use of single for double consonants doubtful (*Ψαμματιχοι* and *Ψαματιχο*, and *αλογλοσος*),

the use of ϙ for *κ* before *ο* (Πελεϙος).

Notice also the *ι* written beside *ō*; our habit of writing *ῳ*, *ᾳ*, etc., dates only from the 12th century A.D. In translating, stops should be put at *επλεον* and at *ανιη*. The first *τοι* = *οἱ* (as in Herodotus), the second *τοι* = *τῷ*. *ʽυις* (*υἷς*) is Doric for *οἷ* 'whither'—'as far as the river allowed them,' i.e. to the Second Cataract. The *αλογλοσος* (*ἀλλογλώσσους*) are the Greek mercenaries. The last line stands for *ἔγραφε δ' ἁμὲ Ἄρχων Ἀμοιβίχου* (*ὁ* Ἀμ.) *καὶ Πέλεκος Οὐδάμου* (*ὁ* Εὐδάμου), 'Archon son of Amoebichos and Pelekos son of Eudamos wrote our names.' *ἁμὲ* is Doric for *ἡμᾶς*.



In another of the inscriptions, which consists simply of a proper name, ʽΑγήσερμος, the rough breathing is indicated by 日 (i.e. H) and *η* by *ε*. This compared with *υἷς*, *ἦλθον*, etc. above shows the transition of the symbol H from *η* to the rough breathing.

Among Attic inscriptions we may notice the elegiac couplet mentioned by Thucydides, vi. 54, found in 1877. Its date is about 515 B.C. It runs as follows:

Attic.
Peisistratus.

Μνεμα τοδε *h*ες αρχες Πεισιστ[ρατος Ηιππιο][1]
υιος θεκεν Απολλονος Πυ[θιο][1] εν τεμενε.

In comparing with the Abu-Simbel inscriptions we may notice—

ε for η, and H for the rough breathing (indicated above by *h*),

ει and ε indiscriminately for later ει (Πεισιστρατος, τεμενε).

We again have ο for ω (Απολλονος).

Archonship of Eucleides.

Ω, H

h

Previous to 403 B.C. the Attic Alphabet used ΧΣ for ξ and ΦΣ for ψ; E stood for ε, η, or ει, and O for ο, ω, or ου. Thus Thucydides wrote ΒΟΛΕ for βολή, βουλή, or βούλει, and ΕΛΘΟΜΕΝ for ἤλθομεν or ἔλθωμεν. In that year, the archonship of Eucleides, a great change was effected in Attic writing. This was the adoption of the Eastern or Ionic Alphabet as the official[2] Athenian script. The reform was due to Archinus. From early times certain users of the Eastern Alphabet had distinguished ŏ from ō by using Ω (an open or wide O) for one or the other. In the Abu-Simbel inscriptions we noticed H used by one man for η and by another for *h*. By the time Archinus introduced the Eastern Alphabet from Samos, Ω had been definitely assigned to ō and H to η. The Athenians had hitherto used H for *h*; but for the last hundred years at least, the sound *h* had been weak and its representation in inscriptions uncertain and irregular. It now ceased to be represented in the Athenian Alphabet.

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[1] The letters within brackets are restored.

[2] It had been used in private documents for some time before.

The 'Breathings.'

The 'Rough Breathing,' originally ├, then L, though it appears to have been known in some form to Aristotle, was generally ascribed along with the accent-system to Aristophanes of Byzantium. It occurs but rarely in the older papyri (300–1 B.C.). The 'Smooth Breathing' is never found either in inscriptions or in papyri, and does not occur regularly till the MSS. of the 7th century A.D. It was never more than a negative sign, used to emphasise the absence of the aspiration. The two Breathings assumed their present form about 1000 A.D.

Western Group.

The peculiarities of the Alphabets of the Western Group are, as we have seen, as follows:

Ξ in the form ⊞, but as a superfluous letter,
X = ξ,
ΦΣ = ψ,
Ψ = χ.
Order of the last three letters—X, Φ, Ψ.

Chalcis and Eretria.

In this group the chief interest lies in inscriptions from Chalcis and Eretria in Euboea and their colonies in the west. The following Eretrian inscription, dating from about 470 B.C., has been found on a statue-base at Olympia:

ΦΙΛΕΣΙΟΣΕΠΟΙΕ	*Φιλήσιος ἐποίει.*
ERETRIEΣTOIΔI	*Ἐρετριεῖς τῷ Δί.*

Here we may notice, as in the Ionic and Attic inscriptions, E for ε, η, and ει, and TOI for τῷ. The chief point is the shape of π and ρ. A slight curve to the short upright in Π (as is found in contemporary inscriptions) would foreshadow the Latin P (*p*), and ρ has already the beginning of the 'tail' which turned P into R. There is a Latin inscription extant which in point of the development of these two symbols is actually *less* advanced than this. In the inscription found in the Comitium in 1899 (ascribed to the 5th century) P and Ր have the values *r* and *p* respectively (see footnote on p. 104).

Chalcidian Colonies.

In the 8th and 7th centuries Chalcis sent out colonists to Italy and Sicily, and founded Cumae, Neapolis, Rhegium, Leontini, Himera, and other cities. It is probable that the Italic Alphabets, including the Latin, were derived from those in use at one or more of these towns.

A Rhegine inscription of the middle of the 5th century contains the following words: HO≀ (ὥς); ΨREMATON (χρημάτων); EV+AMEN (εὐξάμην). Note here—

Ψ for χ,
+ (χ) for ξ,
H (*h*),
V (υ),

and the shape of ρ.

The following inscriptions from Volci in Italy also show the development of the Latin letters:

(i) ≀OϙVA√Ɔ (retrograde): Γλαῦκος (*c.* 500 B.C.) Notice—

ϙ (koppa) Latin Q,
√ Latin L,
Ɔ Latin C.

(ii) IEVS: Ζεύς (*c.* 450 B.C.).

Notice the shapes of ζ, υ, and ς, the last being identical with the Latin S.

Thus when the Latins came to require an alphabet for purposes of trade, they found the inhabitants of the

Latin Alphabet.

neighbouring Greek cities, such as Cumae and Naples, in possession of some such Alphabet as this:

A B C (<) Δ E F Z H ⊕ I K L M N O Γ Ϙ R S (ʒ) T V X Φ Ψ,

with the values

a b c d e ϝ ζ h θ i k l m n o p q r s t u x φ χ.

The aspirates θ (t^h as in *at-home*), φ (p^h as in *uphold*),

Superfluous signs as Numerals.

and χ (k^h as in *ink-horn*), expressed sounds unknown to Latin, and the signs ⊕, Φ, Ψ, were accordingly dropped from the alphabet proper, though from ⊕ or its variant ⊙ came the numeral C = 100 (*centum*), from Φ came the M = 1000 (*mille*), while D, the half of Φ, became the sign for 500; Ψ came to be written ⊥ and finally L, indicating 50.

The early Latins seem to have failed to distinguish the sound *k* from the sound *g* ('hard'). In early in-

C, K.

scriptions C or < is used for either, while K gradually disappears; e.g. VIRCO for *uirgo* in an early inscription and *guberno* from the Greek *κυβερνῶ*. The disuse of K was perhaps aided by the custom of writing it I<, which was liable to be confounded with IC.

For a time F (ϝ) and V (*v*) were employed pro-

F, V.

miscuously to express the *w*-sound (consonantal *u*) of such words as *uinum, uicus,* a sound which, though the symbol for it remained in their alphabet, the Greeks of Italy had practically ceased to pronounce. During this time the *bilabial* (not, as in English, *labiodental*) *f*-sound, which was unknown to Greek, was represented in Latin by FH, i.e. *ϝh* (e.g. FHEFHAKED = *fefaced* = *fecit,* see p. 105). As time went on, however, V was confined to *u*, consonantal or otherwise, and thus the H in FH became superfluous and was finally dropped.

Z, G.

Greek Z probably represented in the alphabets of Cumae and Naples the *z*-sound ('soft' *s*) in Eng. *has, maze.* In early times this sound was part of the Latin language, but later changed to *r*, and Z went out of use, while G, a modification of C, took its place in the Alphabet with the value (g). These latter reforms were ascribed to Appius Claudius Caecus, the censor of 312 B.C., who did for the Latin Alphabet what Archinus did for the Attic Alphabet in the archonship of Eucleides (403). He established the official Alphabet of 21 letters as follows:

App. Claudius' Official Alphabet.

A B C D E F G H I K L M N O P Q R S T V X,

with the values we now give them, save that 'I' did duty for both *i* and *j* (i.e. *i*-vowel and *i*-consonant), and similarly V represented both *u* and *v* (i.e. *u*-vowel and *u*-consonant).

Traces of the older Alphabet remained in—

the use of K in a few words, e.g. *Kalendae, Kaeso, Karthago*;

the use of C and CN as abbreviations for *Gaius* and *Gnaeus* respectively;

the abbreviation M' for *Manius*, a survival of the early five-stroke M (ꟿ)[1].

Greek letters.

The letters Y and Z, representing υ and ζ, came into use in the time of Cicero in writing Greek loan-words, e.g. *zona, cymba,* previously written (e.g. by Plautus) *sona, cumba.* The same spelling was extended to a few words such as *lacryma, inclytus,* wrongly supposed to be derived from Greek. At the same period it became customary to write *Corinthus* for the older *Corintus*, *Achilles* for *Acilles*, *Rhodus* for *Rodus*, etc.

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[1] See the Praenestine Fibula, page 105.

Other modifications.

Among other modifications, we may notice the doubling of consonants which were sounded double (introduced by Ennius about 205 B.C.), the doubling of long vowels when their position left their 'natural' length uncertain, e.g. *paastores* (introduced by Accius about 130), and the writing of *ei* for long *i*. Of these the first reform only was permanent. The second was soon dropped, and the third persisted till the beginning of the Empire.

Further changes belong rather to the history of the Language than to that of the Alphabet, and are discussed in the following chapter, where examples of early Latin inscriptions will be found.

Mon. Ancyr.

The most important inscription of the Classical period is the *Monumentum Ancyranum*, or *Res Gestae Diui Augusti*, inscribed upon the wall of a temple at Ancyra in Galatia. This and other inscriptions of the period are now taken as examples of the spelling of Classical Latin, and it is largely by their means that modern editors have purged our Classical texts of the medieval orthography which had crept into them. This may be seen by comparing any modern text with the editions of a century or two centuries ago, or with the Latin of the epitaphs in our old churches, where we find such forms as *charissima, lachrymæ, conjugis*, for *carissima, lacrimae* (or *lacrymae*), *coniugis*. The letters of the Monument are the same as our own capitals, save that I stands for *i* or *ị* (y), and V for *u* or *ụ* (w).

Subsequent history of the Alphabet.

Cursive.

The subsequent history of the Alphabet must not detain us long. In the early Empire the Romans developed out of the capitals a *cursive* hand, in the same way as the Hieratic was developed out of the Hieroglyphic in Egypt. As written books multiplied, this hand was gradually improved. The letters became simplified, and abbreviations were introduced by monkish scribes. About 450 A.D. it was introduced by St Patrick from Gaul into Ireland, whence it was carried by Irish monks into Northumbria. When Alcuin of York founded the school of Tours in the reign of Charlemagne (800) he introduced his native script. This writing of Tours is known, from *Charlemagne*, as 'the Caroline Minuscule,' i.e. small letters. About this time *j* began to be differentiated from *i* and *v* from *u*, while 'double-*u*' (or, as the French call it, 'double-*v*'), vv, was introduced for the *w*-sound. In the 12th century the Caroline Minuscule degenerated into the 'Black Letter,' in which the earliest printed books (1460) were produced, and from which modern German print is descended. In the early part of the 16th century, however, the 'Roman' letters founded on the old Caroline Minuscule superseded the Black Letter type in England, while our handwriting, which had hitherto resembled that of modern Germany (cf. old Church Registers), began to be modelled on the new 'Italian' style derived from the same source. With the exception of the abolition (about 1800) of the old *ſ*-like *s* at the beginning or in the middle of a word, the English Alphabet has practically undergone no further change.

Caroline Minuscule.

j, v, w.

Black Letter.

Roman Type.

CHAPTER V.

THE ARYAN LANGUAGE AND ITS DESCENDANTS.

Earlier Theories—Modern Theory—Linguistic and Racial Descent—European Races—'Cradle' of Aryan Language—Pre-Aryan Affinities—Table of Aryan Languages—Table of Affinities of Aryan Languages — Indo-Iranian — Armenian — Greek — Albanian— Italic— Celtic—Germanic—Letto-Slavonic—Date of Undivided Aryan—*History of Greek*—The Dialects—Aeolic—Doric—Ionic—Attic and its Descendants—Loan-words in Greek—*History of Latin*—Praenestine Fibula—Sctum de Bac.—Early Writers—Written and Spoken Latin—Graffiti—Petronius—Vulgar Latin after 300 A.D.—Oscan and Umbrian—Loan-words in Latin—Historical Classification of Latin—*History of French*—Romance—Why do we not speak Romance?—Differentiation of Romance—Langue d'oc and Langue d'oïl—Norman French—French of Paris—Standard French—*History of English*—The Britons — Latin loan-words — The English Invaders — The Dialects—Celtic elements—Church-Latin—Scandinavian elements — French — 'Learned' Latin — Standard English — Historical Division—Sweet's Three Stages—Spoken and Written English—Loan-words in English—'True' English and adopted words.

Earlier theories.

TILL the end of the 18th century Latin was held to have been derived from a dialect of Greek, or Greek and Latin to be cousins, both derived from Hebrew. When Sanskrit, the language of the Brahman Scriptures, was made known to European scholars by Sir William Jones in 1786, it became obvious that Greek and Latin were closely allied to Sanskrit. Later, upon the discovery of Zend, the ancient Persian language of the Holy Book of the Zoroastrians, a comparison of the four languages made certain his conception of a great family of sister-languages descended from a single parent. Such a phenomenon is exactly parallel to the descent of the Romance languages—French, Italian, Spanish, and others—from Latin, save that in their case the parent-language has been preserved in literature and inscriptions, while the common original of Latin, Greek, Sanskrit, and Zend has to be reconstructed from its descendants. To take an illustration from another science: if we wished to reconstruct the original horse from which it is conceived that all existing horses are descended, we might compare the following data:

The Modern Theory.

(1) The different varieties of living horse, e.g. Arab, Shetland;
(2) Fossil remains of extinct varieties, e.g. the American toed horse;
(3) Ancient representations in art, e.g. the horses of the Parthenon Frieze.

In the same way we may reconstruct this parent-language of most European and some Asiatic languages by comparing

(1) Different varieties of living languages, e.g. spoken English and German;
(2) Dead languages preserved in their literature, e.g. Greek and Latin;
(3) Dead languages preserved in inscriptions, e.g. the Old Persian of the cuneiform inscriptions.

Examples of Cognates.

In the following examples from five languages (and throughout the succeeding Chapters) Greek and Latin should be pronounced as we have indicated in Chapter IV., and Sanskrit and other less familiar languages according to the phonetic notation used throughout this book (see Index of Phonetic Symbols).

English	German	Latin	Greek (Doric)	Sanskrit
mother (Old Eng. *mōdor*)	*Mutter*	*māter*	*μά̄τηρ*	*mātár*
two (once pronounced as spelt)	*zwei*	*duo*	*δύο*	*dváu*
sta-nd	*ste-hen*	*stā-re*	*ἵστᾱμι* (for *σί-στᾱ-μι*)	*tí-ṣṭ*^{h}*ā-mi*
bear	*bär-en*	*fer-ō*	*φέρ-ω*	b^{h}*ár-āmi*

From these *and many others* we may gather that the sounds of the parent-words were those represented by the symbols *mātēr*, *dwō* (or *du̯ō*), *stistāmi*, b^{h}*erō*.

Names of the Parent-Language.

The hypothetic language whose reconstruction we have thus exemplified is known variously as Indo-European, Indo-Germanic, Eurasian, and Aryan. The last name is employed in this book.

Variations of Meaning.

It must not be supposed that every original Aryan word is found in every language of the Aryan family with the same meaning. The words for 'mother' and 'two' are particularly favourable to preservation of meaning; but, in the majority of cases, cognate or related words—or, as we might say, Aryan words in English, German, Latin, and other, dress—are found to have developed or preserved different meanings just as they have developed or preserved different modes of inflexion (see the following Chapter). Even in the short list given above under *stand*, we find that Greek, for instance, developed or preserved not only a reduplication *σι-* (modified into *ἱ-*) and an inflexion *-μι*, but also a transitive meaning 'set,' thus differing from English, German, and Latin[1]. It is the business of Comparative Philology to explain how these changes arose.

Linguistic Descent.

It is necessary here to warn the student against the common mistake of supposing a linguistic descent to be identical with a descent by birth. For instance, when the Romans conquered Gaul, their *language* gradually ousted the original language of the Gauls (which was something like modern Welsh); but a Roman *population* did not at the same time replace a Gallic population. The people of Gaul remained largely as they were, but gradually came to speak a different language. Thus when we speak of an Aryan race we mean the race who spoke the language from which these languages, English, German, Latin, Greek, Sanskrit, etc., are derived; we do not mean a race from whom the English, Germans, Romans, Greeks, Hindus, etc. might be descended by blood. It is even possible that the Aryan race has entirely died out.

Classification of Europeans by Race.

By race the ancient inhabitants of Europe may be arranged into four classes:

(1) The Scandinavians, a *tall* Northern *long*-headed race, the people who formed the kitchen-middens or shell-mounds of Denmark; now represented by the Swedes, the Frisians, and the fair North Germans.

(2) The Iberians, the *short*, swarthy, Southern *long*-headed race, whose remains are found in the *long* barrows

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[1] In early Latin, however, *stāre* was transitive.

of Britain and the sepulchral caves of France and Spain; now represented by some of the Welsh and Irish, the Corsicans, and the Spanish Basques. Their affinities are African.

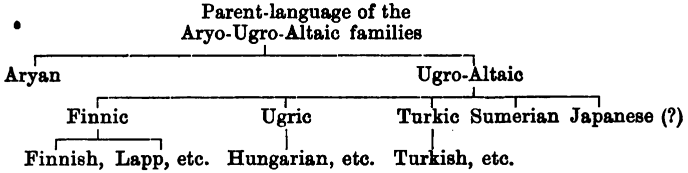
(3) The Celts, a *tall* Northern *short*-headed race, the people of the lake-dwellings of Switzerland, whose remains are found in the *round* barrows of Britain, and in Belgian, French, and Danish graves; they were florid, with light eyes and red hair, and are now represented by the Danes, the Slavs, and some of the Irish. Their affinities are Ugrian (see below).

(4) The Ligurians, the *short*, Alpine, *short*-headed race, whose remains are found in Belgian caves and in central France; they were black-haired, and are now represented by the people of Auvergne, Savoy, and Switzerland. Their affinities are Lapp and Finnic.

Of these four races it is probable, from many considerations, that either the Scandinavians (1) or the Celts (3) were the actual Aryan race. If the former, it would seem that Scandinavia was the original home of the Aryan language, if the latter, Lithuania.

Pre-Aryan Affinities.

It is possible, however, that some day we may go still further back and prove (1) Aryan, (2) Ugrian, the parent-language of two other families represented by Finnish and Hungarian, (3) Altaic, the original of Turkish, and possibly (4) Japanese, to be descended from a common ancestor. There is moreover another claimant to affinity with the Aryan family, Sumerian or Accadian, the most ancient language of which any records have been preserved. This language was spoken in the valley of the Euphrates, and was beginning to be a dead language in 2000 B.C. Its earliest inscriptions go back to 8000 B.C. It has been found to bear striking affinities to the Ugrian family. Thus it may be possible to draw up some such scheme as this:



If the affinities here indicated prove on investigation to be correct, it will follow that the Aryans were an offshoot of an Asiatic race, and that they invaded Scandinavia or Lithuania and imposed their higher civilisation and language on the pre-historic Stone-Age population, the resulting mixed race gradually reverting under climatic influence to the type of the original inhabitants.

We are at present, however, concerned only with Aryan.

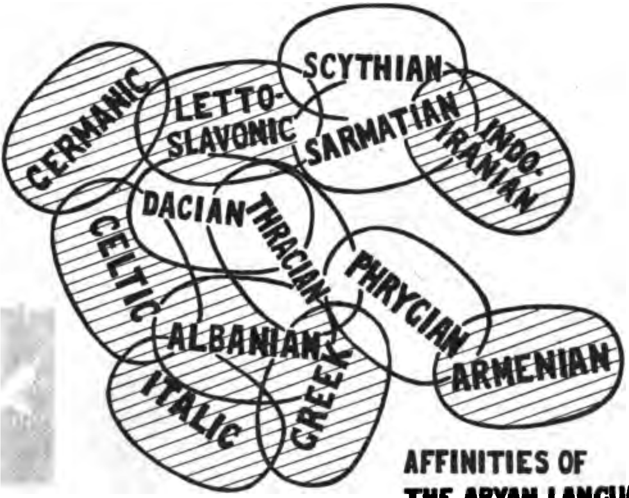
Table of Aryan Languages.

At page 92, where it is placed for convenience of reference, will be found a table which includes the principal languages of the family, and may be taken as a *rough indication* of their descent. It must be borne in mind that we have here only those which survive either as living languages in the speech of to-day, or as dead languages in literature, inscriptions, etc., and that many languages (e.g. Thracian and Scythian), which might have considerably modified the grouping, have been wholly or almost wholly lost.

The table shows about 60 languages, 25 of which are dead and 35 living. The latter are shaded. It must not be imagined that all the ovals include actual languages. For instance, Germanic is the name for a group of languages, not a language; it is probable that there was one original offshoot of Aryan from which the Germanic languages are all derived, but, as in the case of parent-Aryan, there are no records of it.

Table of Affinities.

The affinities of the various groups may be better represented thus, the unshaded portions representing languages which have not survived, but which doubtless formed intermediate links.



AFFINITIES OF
THE ARYAN LANGUAGES

Italic has greater affinity to Celtic on the one hand and Greek on the other than it has to Germanic or Letto-Slavonic. Greek is more closely allied with Italic than with Celtic or Germanic[1].

As will be seen from these tables, there are eight primary groups of Aryan languages—Indo-Iranian, Armenian, Greek, Albanian, Italic, Celtic, Germanic, and

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[1] The diagram is practically that of Dr Isaac Taylor, *Origin of the Aryans*, p. 269.

Letto-Slavonic. Philologists who employ other names for the original language apply the name of Aryan to the Indo-Iranian group.

I. INDO-IRANIAN:

(*a*) Indian branch:—

(1) Sanskrit: the ancient language of the Punjab, preserved in the Veda or Holy Scriptures of the Brahmans, which were handed down for centuries by oral tradition before being committed to writing, and date probably from about 1500 B.C.

(2) Prakrit: } dialects of Sanskrit, now dead.
(3) Pali: }
(4) Hindi: }
(5) Gujarati: } the modern representatives of Prakrit and Pali.
(6) Bengali and others: }

The Gipsy language belongs to this group.

(*b*) Iranian branch:—

(1) Zend (or Old Bactrian): the language of the Avesta or Bible of the Zoroastrians, dating probably from 1100 to 600 B.C.

(2) Old Persian: the language of the cuneiform inscriptions of the Euphrates valley; the oldest belong to the reign of Darius, 520 B.C.

(3) Modern Persian: derived from Old Persian. Its literature begins about 950 A.D., and includes the poems of Omar Khayyám, who wrote about 1100.

II. ARMENIAN: known from 400 A.D. It has no immediate living cognates, but is probably to be connected with ancient Phrygian, of which some inscriptions survive.

III. GREEK: known since the time of the Homeric poems (9th century B.C.?). Strictly speaking it is a group of languages classed as Ionic, Attic, Doric, and Aeolic[1]. From Attic, Modern Greek or Romaic has been developed.

IV. ALBANIAN: the language of ancient Illyricum. It is now spoken in Albania, the westernmost province of Turkey. It has no early literature, and, like Armenian, it stands by itself.

V. ITALIC: a group comprising the chief languages of Italy.

(1) Oscan:
(2) Umbrian[2]: } known only from inscriptions, place-names, e.g. *Pompeii*, and names of Romans, e.g. *Pontius*.

(3) Latin: known by inscriptions from about 400 B.C. Vulgar Latin, which even in the time of Augustus differed considerably from Literary Latin, is known later as Popular Latin, and is now represented by the Romance languages—French, Provençal, Italian, Portuguese, Spanish, Roumansch, and Roumanian (see p. 113).

In many respects the Italic group bears a great affinity to the Celtic.

VI. CELTIC: a group comprising the languages of the extreme west of Europe.

(*a*) Gaulish: known only from inscriptions, names, etc.; the language of the Gauls conquered by Caesar.

(*b*) Goidelic: these three languages were probably identical as late as 900 A.D.; when the Scots from Ireland conquered the Picts, who were the inhabitants of Scotland in Roman times, the language of the Picts became extinct; it may have been a dialect of Gaulish:—

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[1] And others. See p. 94.

[2] These are the most important Italic languages other than Latin. There are others (see p. 104).

(1) Irish: known from inscriptions of the 6th and 7th centuries, glosses upon Latin MSS. of the 8th century, and a literature extending to modern times. Still spoken in parts of Ireland.

(2) Manx: still spoken in the Isle of Man.

(3) Gaelic (or Scotch Gaelic): known from the 11th century; the language of the Highlands of Scotland (not to be confused with the Lowland Scotch, e.g. of Burns, which is a dialect of Old English).

(*c*) Cymric:—

(1) Welsh: the literature of this language extends from the 11th century.

(2) Cornish: became extinct about 1800, but survives in a literature dating from about 1500.

(3) Breton (or Armorican): the language of Brittany; an offshoot of Cornish about 500 A.D.

VII. GERMANIC (or Teutonic): comprising Gothic and two sub-groups.

(*a*) Gothic: preserved in a West Gothic (Visigothic) version of the New Testament made by bishop Ulfilas about 350 A.D., which is the earliest record of the Germanic group.

(*b*) The West Germanic branch, comprising:—

(1) Old High[1] German (first in epic fragments dating from before 800 A.D.), with its descendant Modern German,

(2) Old Low[1] German, subdivided into

(i) Old Saxon: dating from the 9th century, with its modern non-literary representative Low Saxon, which is spoken over a large part of Northern Germany,

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[1] See footnote, p. 117.

(ii) Anglo-Frisian: the common original of Modern Frisian and English (see p. 116), of which the earliest monument is the poem *Beowulf*, which may have been composed before the English invasion of Britain; Frisian is spoken in the north of Holland and on the N.W. coast of Germany, and is known collectively with Low Saxon as Plattdeutsch,

(iii) Old Low Franconian: the language of the Franks, whence come Dutch and Flemish.

(*c*) The Scandinavian (or East Germanic) branch: these four languages were probably identical till 800 A.D., the old language being preserved in Runic inscriptions from about 400; in the 9th century the language began to diverge into two dialects, East and West, which became further differentiated before 1100:—

(1) East Scandinavian, comprising

(i) Danish: the language of modern Denmark and Norway,

(ii) Swedish: the language of all Sweden except the extreme north, where Lappish and Finnish (non-Aryan, see p. 86) are spoken.

The earliest monuments of East Scandinavian are Runic inscriptions dating from about 950. Swedish literature begins about 1250.

(2) West Scandinavian, comprising

(i) Icelandic: the language of the Eddas and the Sagas (800—1150), known as Modern Icelandic since 1540,

(ii) Norse or Old Norwegian: now represented only by peasants' dialects[1].

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[1] Modern Norwegian, the language of educated Norway, is really Danish, but has adopted many Old Norwegian words since the political separation from Denmark in 1814. There are also some marked differences of pronunciation.

VIII. LETTO-SLAVONIC:

(*a*) Lettic or Baltic branch: a group comprising the languages spoken on the southern and south-eastern shores of the Baltic:—

(1) Old Prussian: became extinct about 1700, leaving a catechism and a glossary as the only literature of this group.

(2) Lithuanian: } spoken in the frontier district
(3) Lettish: } of Russia and Prussia.

(*b*) Slavonic branch: comprising the languages (except Turkish and Hungarian, which are non-Aryan, see p. 85) of Central and Eastern Europe:—

(1) West Slavonic, subdivided into

(i) Wendish: spoken in a district of Central Germany,

(ii) Czechish or Bohemian: the language of Bohemia; its earliest records are ecclesiastical writings dating from about 950 A.D.,

(iii) Polish: the language of Poland; its earliest literature is prior to 1200.

(2) Old Bulgarian (or East Slavonic): preserved in the earliest Christian writings of the Slavs dating from about 900 A.D., with its offshoots

(i) Slovenian: spoken in parts of Austria and Hungary,

(ii) Russian: of which the literature begins about 1050,

(iii) Servo-Croatian: spoken in Servia and on the north-eastern coast of the Adriatic, dating from about 1150,

(iv) Modern Bulgarian: of which there is a considerable literature, consisting largely of collections of popular songs.

Date of undivided Aryan.

As to the age of these languages, the oldest contemporary records, apart from the still undeciphered Cretan writings, are the Greek and Italic inscriptions. These do not go much further back than 600 or 700 B.C. The oldest literary document, the Rig-Veda, may be as old as 1500 B.C. A rough estimate based on the comparison of the oldest forms of each language gives us about 10,000 B.C. as the latest date for an undivided Aryan language, i.e. the latest date at which all Aryan speakers could understand each other[1].

The questions, Why are these languages different, and how did they become so? will be discussed in the following Chapter. We may, however, discuss briefly the history of the languages with which we are chiefly concerned.

History of Greek.

According to a recent ethnological work the Greeks of the Homeric Age were a composite race, a mixture of the old Pelasgian stock with the Achaean invaders from the north. Both Pelasgians and Achaeans spoke an Aryan language, but the language which prevailed and which we know as Greek was the language of the Pelasgians.

Dialects.

In the historic period we find this language represented by a group of dialects spoken in Southern Italy, Sicily, Greece, the Aegean, the Western coast of Asia Minor, Cyrene, and Cyprus. The affinities of these dialects are Latin on the one hand and Indo-Iranian on the other. They differ in their sounds, inflexion, syntax, and vocabulary. They may be broadly divided into two groups,

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[1] Sweet, *Hist. of Language Primer.*

(1) those which preserve the original Aryan ā (as in μάτηρ), and

(2) those which change it to ē (as in μήτηρ),

and are generally classed as follows:—

ā

(i) Aeolic: corresponding to the Achaean race-group, spoken chiefly in Thessaly (except Phthiotis), Boeotia, Lesbos, and N.W. Asia Minor.

(ii) Doric: corresponding to the Dorian race-group originally living north of the Gulf of Corinth but migrating later into the Peloponnese; spoken chiefly in Laconia and Tarentum, Messenia, Argolis and Aegina, Megara with Selinus and Byzantium, Corinth with Corcyra and Syracuse, Crete, Melos and Thera with Cyrene, and Rhodes with Gela and Agrigentum.

η

(iii) Ionic: corresponding to the Ionian race-group, spoken in Euboea with Cumae and Chalcidice, the Cyclades, Chios and Samos, and S.W. Asia Minor including Ephesus and Miletus.

(iv) Attic: the dialect of Attica, classed by some writers as Ionic, but showing important differences.

To these four classes should be added several smaller groups and single dialects, which, though they all preserve the original ā, cannot be assigned with certainty to any one of them:—

Arcadian and Cyprian,
Pamphylian,

Elean,

the dialects of N.W. Greece—Achaea, Locris, Phocis (with Delphi), Aetolia, Acarnania, Phthiotis, and Epirus.

Aeolic.

(i) Apart from inscriptions Aeolic is represented by the Lyric Fragments of Alcaeus and Sappho, where its chief peculiarities are seen in—

the absence of the rough breathing,

a more general use of -μι-verbs (e.g. κάλημι = καλέω),

the retention of ϝ (w),

certain vowels (e.g. -ως = -ους in the Acc. Plural),

the labialisation of dentals under certain circumstances (e.g. φήρ for θήρ, πέτταρες or πέσυρες for τέτταρες). Aeolic also threw back the accent as far as possible, e.g. σόφος, αὖτος, πόταμός.

For an example of Aeolic see the quotation below (p. 97) from the 'original' Iliad.

Doric.

(ii) Doric is represented in literature by the Lyric Fragments of Alcman, the treaty in Thucydides v. 77, the Laconian in the *Lysistrata*, 1076 ff., and the Megarian in the *Acharnians*, 729 ff. Aristophanes, however, is considered untrustworthy. The Doric of Theocritus is a more or less artificial literary dialect, and does not truly represent the dialect of any one district. In the choruses of Attic tragedy the Doric forms (e.g. μάτηρ for μήτηρ) are a literary convention. Among the universal characteristics of Doric we may notice—

-μες for -μεν in the 1st Person Plural, e.g. λύομες for λύομεν (cf. Latin *regimus*),

the Future Passive has the Active Suffix, e.g. λυθήσω for λυθήσομαι, the Aorist and Future of verbs in -*ζω* are formed with -*ξ*- (e.g. *καθίζω, καθίξω*),

λάω is used for ‘wish.’

In Laconian Doric notable points are—

τιρ for *τις*,

μῶά for *μοῦσα*,

σ for *θ*, e.g. *ναὶ τὼ σίω* = *νὴ τὼ θεώ* (though this is probably later than Alcman, Thucydides, and Aristophanes, where the change is thought to be due to copyists).

In Sicilian Doric we find—

ν for *λ* before dentals, e.g. *ἦνθον* for *ἦλθον*,

Perfects declined as Presents, e.g. *πεπόνθεις* = *πέπονθας*.

Theocritus in his Bucolic idylls, as we have them now, shows these forms; some of his forms, however, are Aeolic, e.g. *μοῖσαι, νίκημι*.

In Cretan Doric we find the original -*ns* preserved, e.g. *τόνς* = *τούς*, *θένς* = *θείς*.

Ionic.

(iii) Ionic is represented by an extensive literature, which must be dealt with more at length. It may be divided historically thus:—

(1) Old Ionic of the Iliad and the Odyssey (see below),

(2) Middle Ionic of the Elegiac Poets, e.g. Mimnermus,

(3) New Ionic of Herodotus and Hippocrates.

Homer.

The dialect of the Homeric poems (the so-called Epic) is usually classed as Old Ionic. The question of its origin is practically the question of the origin of the poems themselves. This question has never been conclusively answered. As we have them now, the Iliad and the Odyssey are mainly Ionic;

but there is a strong admixture of Aeolic forms. The composite nature of their dialect, combined with other considerations, makes it probable that they were either (1) originally composed in Aeolic, or (2) based upon the lays of Aeolic bards. The former view is that of Fick. According to him the Iliad and the Odyssey were composed in Aeolic and have been gradually Ionicised by being handed down by generations of speakers of the Ionic dialect, if they are not actually the result of an early Ionic recension.

The Aeolic Homer.

The Iliad, according to Fick, probably began thus:

μᾶνιν ἄειδε, θέα, Πηληϊάδα' Ἀχίλησς
ὀλλομέναν, ἃ μύρι' Ἀχαίοισ' ἄλγε' ἔθηκε,
πόλλαις δ' ἰφθίμοις ψύχαις Ἄϝιδι προΐαψε...

Our Ionicised version reads as follows:

μῆνιν ἄειδε, θεά, Πηληϊάδεω Ἀχιλῆος
οὐλομένην, ἣ μυρί' Ἀχαιοῖς ἄλγε' ἔθηκε,
πολλὰς δ' ἰφθίμους ψυχὰς Ἄϊδι προΐαψεν...

Notice the hiatus, Πηληϊάδεω Ἀχιλῆος, which has been produced by the change of dialect.

The other view is as follows:—The Iliad is the result of the work of a great Ionian poet and his school upon Aeolian material. This material consisted of Aeolic lays embodying the legends of Achilles, Agamemnon, and other heroes. If we take the date of the first great poet as about 900—850 B.C., the Iliad had probably grown into something like its present shape before about 750. With regard to the Odyssey, its kernel, the 'Return of Odysseus,' arose in a similar way and was afterwards enlarged by the addition first (before about 800) of most of the later books, and later (before about 650) of the first four.

The Ionic Homer.

Hesiod.

With regard to Hesiod, Fick's view is that he wrote in the dialect of Delphi and that his poems were assimilated later to the 'Epic' style, i.e. Ionicised Aeolic. It is more probable that Hesiod himself wrote in 'Epic,' as the only literary style he knew. He is generally considered to be responsible for the nucleus of the *Works and Days*, which is probably to be dated between 750 and 700 B.C. The *Theogony* is of different authorship and somewhat later date. The *Shield of Heracles* may be as old as 600, but is probably not older. Some of the Homeric Hymns belong to this period.

The Homeric Hymns.

Middle Ionic.

Between Homer and Hesiod on the one hand and Herodotus and Hippocrates on the other comes the Ionic of the poets Archilochus, Mimnermus, Hippōnax, and others. In their fragments we find a certain admixture of Epic forms, which to them were literary archaisms, e.g. we find *θανάτοιο* as well as *θανάτου*, *γαῖα* as well as *γῆ*.

It is characteristic of Ionic (as also of Attic) to change original ā into ē, to drop ϝ (w), and to use *ἄν* not *κεν* or *κα*. A characteristic which it does not share with Attic, *κο-* and *κη-* for *πο-* and *πη-* (representing Aryan $q^{w}o$- and $q^{w}\bar{a}$-), e.g. *κοῦ* = *ποῦ*, though frequent in Herodotus and the Iambic Poets, is found neither in the writings of Hippocrates nor in inscriptions. Ionic also has no dual.

New Ionic.

The chief peculiarities of Herodotus, as we have him now, are—

η for ā, even where the ā is original, e.g. *πρῆγμα*,

κ for *π* as above,

ξεῖνος, *μοῦνος*, etc. for *ξένος*, *μόνος*, etc.,

vowels remain uncontracted, e.g. *ἐποίεε*.

Attic.

Old.

(iv) Attic. The *literature* of Athens was originally a branch of Ionic literature. The dialect of Solon's fragments is largely Ionic. In the Old Attic of Thucydides and the Tragedians we find relics of this literary tradition in forms borrowed from the Ionic dialect, e.g. *ξύν* for *σύν*, *αἰεί* for *ἀεί*, *θάρσος* for *θάρρος*, and, where required by metre, *-οισι*, *-αισι*, in the Dative Plural for *-οις*, *-αις*. The other point of difference between Old and New Attic, *-σσ-* for *-ττ-*, was probably merely a different spelling of the same sound (Eng. *th* in *thin* doubled, see p. 47). It should be borne in mind that all the above forms were foreign to *spoken* Attic. The New Attic is seen in Aristophanes, Plato, and Demosthenes. Of this examples are unnecessary.

New.

Classification of its descendants.

The Attic dialect and its descendants may be classified historically thus (Classical and Post-Classical representing Pagan Greek, then a Transition period, and finally Neo-Hellenic representing Christian Greek[1]):

CLASSICAL:—

(1) B.C. 500–400, Old Attic of Thucydides and the Tragedians.
(2) 400–300, New Attic of Plato and Demosthenes.

POST-CLASSICAL:—

(3) 300–150, Hellenistic.
    (*a*) Alexandrian Prose.
    (*b*) Colloquial.

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[1] The Table is practically that of Jannaris's *Historical Greek Grammar*.

(4) 150 B.C.–300 A.D., Graeco-Roman.
  (*a*) *Atticising*[1]: Lucian and Pausanias.
  (*b*) Common or Conventional (ἡ κοινὴ διάλεκτος): Polybius and the Septuagint.
  (*c*) Levantine: New Testament.
  (*d*) Colloquial[2].

TRANSITIONAL:—

(5) 300–600, Transitional.
  (*a*) Ecclesiastical (founded on LXX. and N.T.).
  (*b*) Secular (*Atticising*[1]).
  (*c*) Colloquial.

NEO-HELLENIC:—

(6) 600–1000, Byzantine.
  (*a*) Ecclesiastical (combining (*a*) and (*b*) of previous period).
  (*b*) Colloquial.

(7) 1000–1450, Medieval.
  (*a*) Literary (founded on Colloquial of previous period).
  (*b*) Colloquial.

(8) 1450–1800, Modern.
  (*a*) Literary.
  (*b*) Colloquial.

(9) 1800–1900, Present.
  (*a*) Literary (including Journalistic); *Atticising*[1].
  (*b*) Colloquial.

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[1] i.e. reverting to the Classical Attic models.

[2] Preserved to some extent in Papyri.

Hellenistic.

The intellectual ascendancy of Athens, coupled with the new need of a common tongue, brought about in the Macedonian period the supremacy of her dialect in the eastern Mediterranean. This Hellenistic dialect, as it is called, must have differed considerably according as it was written or spoken.

Graeco-Roman.

In the Graeco-Roman period we may distinguish, besides the colloquial or spoken dialect (preserved to some extent in 'unlearned' inscriptions and papyri), three dialects,

(1) that of the Atticising purists such as Lucian, who reverted to Classical Attic models,

(2) a sort of Colonial Greek employed by Hellenised foreigners and Asiatic Greeks, known as the Levantine dialect and seen in the New Testament,

ἡ κοινή.

and (3) midway between these two, the Common or Conventional dialect, *ἡ κοινὴ διάλεκτος*, preserved in the Septuagint, Polybius, and Plutarch.

Later History.

In the Period of Transition between Pagan and Christian Greek (300–600 A.D.), ecclesiastical writers founded their style on the Septuagint and the New Testament, while the Secular books revert once more to Classical models.

At the beginning of the Neo-Hellenic Period (600–1900) we find the Byzantine Greek which sprang up in the Eastern Empire combining the Ecclesiastical and Secular elements.

In the subdivision of this known as the Medieval Period (1000–1450) there was a great change. Hitherto the language of the people, which though doubtless affected to some extent by the Church language had by this time diverged widely from the ancient dialect, had been rigorously excluded from literature. In this period the literary dialect is for the first time founded on *Colloquial* Greek.

The period of Turkish supremacy (1450–1800) was one of darkness and ignorance, and the Greek language lost all the words belonging to science and culture. The structure remained the same, but the vocabulary was much reduced and changed.

Present Greek.

Within the last 80 years the regeneration of Greece and the revival of national spirit has caused much of this loss to be made good. Scholars and journalists, indeed, have imitated the Classical models with such zeal that the dialect of literature and the newspapers is but a modernised form of ancient Attic, unintelligible to the great bulk of the people. The spoken language, however, despite the purists, remains a direct and natural development of the language of Periclean Athens.

Loan-words in Greek.

The foreign element in Classical Greek is very small. Among the 5000 words of which (neglecting derivatives and compounds) the language is composed, there are about 70 foreign or presumably foreign words of ordinary occurrence in literature. Of these about 20 occur first in Homer, about 40 in the writers of the 7th, 6th, and 5th centuries especially Herodotus, and the rest in the writers of the 4th century and later.

(1) Homer:—

Metals: *κασσίτερος*^{S}, *χρυσός*^{S}, *σίδηρος*, and *μόλυβδος*[1].

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[1] Only in the word *μολύβδαινα*.

Other merchandise: *ἐλέφας* (ivory), *ὀθόνη*^{S}, *φοῖνιξ*^{S}, and *κρόκος*^{S}.

Miscellaneous: *πέλεκυς*^{S}, *χιτών*^{S}, *φῦκος*^{S}, *κίων*^{S}, *κάνεον*^{S}, *κυπάρισσος*^{S}, *ἀσάμινθος*, *ἄφλαστον*, *ἔθειρα*, *πεσσός*, *λέων*.

(2) The 7th, 6th, and 5th centuries:—

Spices: *κασία*^{S}, *κίνναμον*^{S}, *κύμινον*^{S}, *λιβανωτός*^{S}, *μύρρα*^{S}, *νᾶπυ*.

Other merchandise: *ἐλλέβορος*, *σήσαμον*, *κάνναβις*^{A}, *φάσηλος*, *κόμμι*, *νίτρον*^{S}, *γύψος*^{A}, *ἄσφαλτος*, *σινδών*^{A}, *βίβλος*, *χάρτης*, *ἔβενος*^{S}, *σμάραγδος*^{S}.

Money: *μνᾶ*^{S}, *δαρεικός*^{A}.

Miscellaneous: *σάνδαλον*^{A}, *σάκκος*^{S}, *σισύρα*, *ἀρραβών*^{S}, *κάδος*^{S}, *κόφινος*, *βάρβιτος*, *λύρα*, *διθύραμβος*, *ἔλεγος*, *ἄκατος*, *ἀσκάντης*, *κόλυμβος*, *τέρμινθος*, *μάγος*^{A}, *βάσανος*, *ἀτταγᾶς*, *κάμηλος*^{S}, *πάνθηρ*^{A}, *σέρφος*, *ταῶς*^{A}, *τίγρις*^{A}.

(3) The 4th century and later:—

Precious stones: *ἴασπις*^{S}, *σάπφειρος*^{S}, *μαργαρίτης*^{A}.

Spices: *βάλσαμον*^{S}, *νάρδος*^{S}, *πέπερι*^{A}, *σίναπι*, *χαλβάνη*^{S}.

Miscellaneous: *γάζα*^{A}, *πάπυρος*.

Their Sources.

Of the above words those marked ^{S} are from Semitic sources, generally having their counterpart in Hebrew; those marked ^{A} are from Aryan languages other than Greek, e.g. Old Persian (*σάνδαλον*) and Sanskrit (*σινδών*). Of the rest *βίβλος*, *χάρτης*, *πάπυρος*, *κόμμι*, and *λέων* are Egyptian, and *μόλυβδος* probably Iberian[1]. The sources of the remaining words are doubtful or unknown.

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[1] The pre-Roman language of Spain, now represented by Basque, spoken in the Pyrenees.

After 150 B.C. words had to be found for Roman officers and institutions. For this purpose Greek words were mostly employed with a new signification, e.g. *ὕπατος* for *consul*, but in some cases Latin words such as *σπεκουλάτωρ*, *πραιτώριον*, *δηνάριον*, came into use. Two interesting importations of this period are *σήρ*, 'silk,' from the Old Chinese *sir*, and *βίσων*, 'aurochs,' from an old Germanic language (cf. German *Wisent*).

History of Latin.

The language of the Romans was originally, as the name implies, the language of Latium, and its early history is parallel to that of Oscan and Umbrian and the other languages of the Italic group. The affinities of these languages are Celtic on the one hand and Greek on the other. Thus Welsh and Latin both make the Passive in *-r*, and in Gaulish there was a Dative Plural of the third declension in *-bo*, e.g. *matrebo* = *matribus* (in early poetry *matribu'*).

Affinities of Italic.

Praenestine Fibula.

The earliest records of Latin date from the 5th century B.C. The oldest inscription[1] is that of the Praenestine Fibula (i.e. brooch found at Praeneste), which is generally ascribed to the 5th century. A drawing of it is given opposite. It reads from right to left:

Manios med fhefhaked Numasioi,

i.e. *Manius me fecit Numerio*, 'Manius made me for Numerius.'

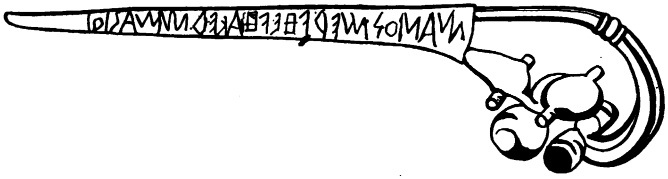
---

[1] The inscription found in 1899 in the Comitium at the N.W. corner of the Roman Forum is of extreme interest as by far the oldest *official* Latin document. It is considered to date from before 390, but is probably not so old as the Praenestine Fibula.

Here we should notice—

that the strong stress accent on the first syllable has not yet changed the nominative *-os* (identical with the Greek) into *-us*;

mēd the accusative has the *-d* of the ablative (so too, *ted*, *sed*, are both accusative and ablative, see below); this form is common in Old Latin and was due either to a confusion of the two forms *me*, accusative, and *med*, ablative (so in Eng., *him*, originally the dative as in *give it him*, has ousted the old accusative *hine*) or else to a suffix *-id* found in Sanskrit;



The Praenestine Fibula [see p. 104].

in *fhefhaked*, *fh* (i.e. *ϝh*) was the early symbol for the bilabial *f*-sound (see p. 78);

-ak- is not yet changed by the stress to *-ek-*, or *-ēd* (representing *-eid*) to *-ĕt* and finally *-it*;

k has not yet given way to *c*;

we have the reduplicated form *fĕfăkei* for *fēcī* (cf. the uncertainty in Classical Latin between *pepigi* and *pegi*);

in *Numasioi*, the accentuation of the first syllable has not weakened the succeeding vowels, i.e. it is not yet *Numesioi*;

we still have *s* representing the 'soft' *s* (z) between vowels, which afterwards became *r*;

the dative singular *-ōi* has not yet become *-ō*.

Sctum de Bac.

A copy of the *Senatus consultum de Bacchanalibus*, a decree of 186 B.C., two years before the death of Plautus, has been found on a bronze tablet in Southern Italy, and is invaluable as showing a middle stage in the changes that were going on in the language between the 4th century and the Classical period. It should be borne in mind, however, that legal documents and the like are apt to preserve archaisms (e.g. in this case the *-d* of the ablative, which is proved by contemporary inscriptions not to have been generally pronounced at this time). A short extract must suffice:

Bacas uir nequis adiese uelet ceiuis Romanus neue nominus Latini neue socium quisquam nisei pr urbanum adiesent isque de senatuos sententiad dum ne minus senatoribus c adesent quom ea res cosoleretur iousiset,

which we may rewrite in Classical Latin thus:

Bacchas uir nequis adiisse uellet ciuis Romanus, neue nominis Latini, neue sociorum quisquam, nisi pr(aetorem) urbanum adiissent, isque de senatus sententia, dum ne minus senatoribus c(entum) adessent cum ea res consuleretur, iussisset.

Notice here—

as in earlier inscriptions, there are no double letters, e.g. *adesent, uelet, iousiset* (see p. 79);

Bacas, in Greek words *ch, ph, th* only came in at the close of the Republic (see p. 79);

in *adiese, -es-* for *-is-*, probably a relic of the use of *e* for *ei*, cf. *fhefhaked* above;

in *ceiuis*, *ei* represents long *i*; this custom was just coming in; notice *Latini* not *Lateini* below;

Romanus, contrast this with *Manios* above; the stress-accent has done its work;

nominus is a relic of the *-os*-form of the Aryan genitive; the usual form *-is* comes from *-es*;

in *Latini* (genitive) we have *-i* not *-ei*, which strictly belongs to the nominative plural;

in *socium* we have the correct form of the 2nd declension genitive plural in *-ōm* (cf. Greek *-ων*) afterwards *-ŏm* (weakened by the stress on the first syllable), preserved in poetry in Classical times, e.g. *deum*, *diuom*, and in *sestertium*, *nummum*; the ending *-orum* originated in the pronouns, where it was formed on the analogy of the *-arum* of the *a*-stems;

in *senatuos* we have a bye-form of the 4th declension genitive singular; there seems to have been some doubt how this genitive should be formed, as we find *senati* as well as the Classical *senatūs* and in Terence *Heaut.* 287 we have *anuis* for *anūs*;

sententiad, so in the same inscription *magistratud*, *preiuatod*; this is the regular form of the ablative singular in *-a*, *-i*, *-o*, and *-u* in Old Latin, and is found in Oscan;

cosoleretur, *cos-* for *cons-* (cf. abbreviation *cos* for *consul*); this points to the nasalising of the *o* as in French *bon*; the *n* was restored in Classical spelling; *-sol-* has not yet been weakened to *-sul-*; notice the *-r-* where the earlier inscriptions would give *-s-* (cf. *Numasioi* above);

iousiset; there was a bye-form *ioubeo* for *iŭbeo*, of which this is probably the pluperfect subjunctive; the *u* in the Classical *iussi* is short by nature; notice that *ou* has not yet become *ū*.

It will be seen that a large proportion of the above changes are due to stress-accent. This is more fully discussed in Chapter III.

Evidence of early writers.

Before the above inscription was written Plautus had produced most of his plays, but these, like the fragments of contemporary writers such as Naevius and Ennius, are less trustworthy than contemporary inscriptions as examples of the Latin of the period. They have come down to us through later Latin, and their text has been to a certain extent modernised. By the help of inscriptions, however, the old forms can be restored where the metre requires it, though Plautus' rules of metre are by no means the same as those which obtained in Classical times.

Latin and the Greek dialects.

Greek is already a collective name for a group of dialects when it emerges from the pre-historic period; Latin, on the other hand, did not develop dialects till it became the language of the various provinces of the Roman Empire. The difference between a dialect and a language is only one of degree. We may therefore consider that Latin bears the same relation to Italic, the hypothetic ancestor of Latin, Oscan, and Umbrian, as Attic Greek to the hypothetic ancestor of Attic, Ionic, Doric, and Aeolic. The ascendancy of Attic over the other Greek dialects was literary, that of Latin over its sister languages mainly political. Though Latin developed no dialects in the ordinary local sense, by the time of Cicero the literary dialect differed considerably from the vernacular. On a leaden bullet dating from 40 B.C. we have the old genitive singular *Caesarus*; cf. *nominus* in the *Sctum de Bac.* Scratched on walls at Pompeii we find (1) *Venere*

Vulgar Latin Records.

Graffiti.

uoster.

Petronius.

for *Venerem,* pointing to the pronunciation of *-em* as a nasalised *e* (French *-en*); (2) *libes* for *libens,* which points to a similar nasalisation (cf. *uicies, uiciens*; *uicesimus, uicensimus*; and *cosoleretur* in the *Sctum de Bac.*); and (3) *cum collegas* for *cum collegis*; this is the beginning of the loss of the cases (cf. French) occasioned by the extension of the use of prepositions, which are less variable and more explicit. There are indications of the preservation of older forms and older pronunciation in the speech of the people, just as *thou* and *thee* are preserved in some English dialects. A striking instance is the form *uoster* for the literary *uester*; *uoster* was the older form, but as it belonged to the language of the people it persisted into Late and Popular Latin and produced the French *votre.* We get a glimpse of the vernacular Latin or 'plebeius sermo' of the early Empire in Petronius, where it is used by certain characters. Its chief peculiarities are the frequent use of slang and Greek words and the occurrence of grammatical 'mistakes.' Thus we find—

diibus for *dis,*
caelus for *caelum* (cf. *caeli* plural in Church Latin),
pudeatur for *pudeat,*
exhortauit for *exhortatus est,*
munus excellente for *munus excellens,*
apoculamus nos for *abimus ab oculis,*
ipsimus for *dominus,*
faciamus for *bibamus,*
saplutus (ζάπλουτος),
tengomenas (τεγγομένας)

Vulgar Latin after 300 A.D.

By the time of Ausonius (350 A.D.) the vernacular and the literary dialect had become almost different languages. It is from the vernacular that the Romance languages have sprung. In the instances given below there is a distinct approximation, in structure as well as in pronunciation, to French and Italian. The inscriptions of the time present the literary language (Low Latin) more or less correctly according to the education of the writer, and thus give us glimpses of the vulgar dialect (Popular Latin) of the period. But we have no actual record of it.

Evidence of Inscriptions.

Here are some of the 'faults':—

instead of the cases we find prepositions used, e.g. *de uino* genitive (French *de vin*), *ad uino* dative (French *à vin*);

as the result of this extension of the use of prepositions, final consonants are dropped, e.g. *uino* for *uinum* (Italian *vino*);

auxiliaries such as *habeo*, *uado*, take the place of tense-suffixes, e.g. *habeo factum* for *feci* (French *j'ai fait*).

Metre.

The metre of the hexameter and elegiac epitaphs of the period is largely a matter of stress as in modern English poetry. Two lines from the epitaph of a Spanish bishop will illustrate this. It belongs to the early part of the 6th century:

te Ioan|nem Tarra|co colu|it mi|rificum |uatem|
tuosque in | hoc lo|co in |pace | condidit | artus|.

Oscan and Umbrian.

The other Italic languages, of which Oscan and Umbrian are the most important, are known only from inscriptions, names, and quotations.

Instances of Oscan are—

pud = *quod*; cf. ποδ-απός;
kumbened = *conuenit*; cf. *fhefhaked* above;
pomtis = *quinquies*; cf. πέμπτος;

of Umbrian—

pufe = *ubi*; cf. *si-cubi*;
antakres = *integris*;
futu = *esto*; cf. *fui*, φύω.

Loan-words in Latin.

Latin borrowed a number of words from these languages, e.g. *rufus* beside true Latin *ruber* (both from the Aryan word represented in Greek by ἐρυθρός and in English by *ruddy*) and *popina* beside *coquus*. *Famulus*, too, probably came from this source. We may also compare *Pompeius*, *Pontius*, with *Quintus*, *Quinctius* (cf. *pomtis* above). *Nero* is the Sabine cognate of ἀνήρ. The fact that we find *bos* in Latin instead of *uos* for 'ox' (cf. βοῦς, *cow*; *uenio*, βαίνω, *come*) is probably due to its being a loan-word from Oscan.

The great majority of loan-words in Latin come from Greek or through Greek. In the writings of Plautus and the contemporary fragments there are about 120 foreign words of ordinary occurrence, nearly all of which are Greek. Greek influence was doubtless felt from very early times. Intercourse with the Greek cities of Southern Italy not only gave the Romans their alphabet, but gradually brought in many words, especially—

(1) those belonging generally to a higher civilisation, e.g. *ballista*, *balneae*, *cista*, *comissor* (κωμίζω = κωμάζω), *cratera*, *epistola*, *lampas*, *lanterna*, *machina* (μᾱχανᾱ), *parasitus*, *poeta* (ποιητής), *purpura*, *theatrum*, and names of Gods as *Apollo*, *Hercules*, *Aesculapius*;

(2) words connected with trade and travel, e.g. *ancora*, *aplustre* (ἄφλαστρον), *carbasus*, *exanclo* (ἐξαντλέω), *guberno* (κυβερνάω), *mina* (μνᾶ), *talentum*, *tarpessita* (τραπεζίτης), *thesaurus*, *trutina* (τρυτάνη).

To these we may add:—

(3) *aer*, *aether*, *bracchium*, *cadus*, *laena* (*χλαῖνα*), *pelagus*, *placenta* (*πλακοῦς*), *oliuum* (*ἔλαιϝον*), *rosa* (Aeol. *ῥοζά*[1]), *triumphus* (*θρίαμβος*).

At the time of the conquest of Greece, the effect of Greek civilisation became still more marked, and the more general study of Greek writers added to Latin literature a large number of words, many of which in course of time became part of the spoken language, e.g.:— *astrum*, *aula*, *aura*, *chorus*, *coma*, *glaucus*, *Musa*, *philosophus*, *thalamus*[2]. By the end of the Augustan period the spoken language, especially in the coast-towns, contained a large proportion of Greek words (see instances above from Petronius).

Foreign names for foreign things naturally came in, as the Roman empire extended, not only from Greece, but from Gaul and Germany and the further East. Such words are:—

balteus, *caballus*, *esseda*, *petorritum*, *raeda*, *sagum*, from Celtic, probably Gaulish,

sapo, *urus*, from Germanic,

piper, *sulfur*, from Sanskrit.

Plumbum is probably a very early loan-word from Iberian (identical with *μόλυβδος*, see p. 103), and *tunica* from Semitic (identical with *χιτών*). *Satelles* is said to be Etruscan.

Latin may be classified historically as follows:—

Historical Classification.

(1) To 250 B.C.: The Preliterary Latin of the early inscriptions,

(2) 250–150: The Early Latin of Plautus and Ennius,

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[1] For *ῥοδία*, i.e. *ῥοδέᾱ*, a rose-bush.

[2] Some of these words occur as early as Ennius and Naevius, but it is doubtful how far they were part of the language at that time.

(3) 150–Cicero: Republican Latin,
(4) Cicero–Augustus: Golden Age Latin,
(5) First two centuries of the Empire: Silver Age Latin,
(6) 180 A.D.–500: Late Latin.

It should be noted that between periods (3) and (4) Spoken Latin began to diverge from Literary Latin; our only glimpses of its earlier history are in Petronius (60 A.D.) and the 'graffiti' or wall-scribblings of Pompeii and elsewhere. Later it diverged again, the spoken form being known to us as Popular Latin and the written as Low Latin. In the Middle Ages Popular Latin became differentiated into the various Romance Languages.

Low Latin and Popular Latin.

As an example of the Romance Languages we shall take the most familiar to us—French.

History of French.

Languages descended from Latin are spoken in the following countries:

Italy and Sicily,
Spain,
Portugal,
France, Belgium, and Western Switzerland,
Roumania,
Eastern Switzerland and the Western Tyrol.

The language of Eastern Switzerland is known as Roumansch or Rhaeto-Romanic[1]. Spanish and Portuguese are also spoken throughout South and Central America, and in parts of the West Indies and of Africa. These six or more languages are the direct result of the political ascendancy of Rome.

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[1] From the Roman province of *Rhaetia*.

Why do we not speak Romance?

Why the language of the Romans has survived in Gaul and Spain and not in Britain is a difficult question. In each case we have a Celtic-speaking country occupied for some centuries by Rome and afterwards invaded by a less civilised race. Professor Sayce[1] lays it down as a general rule that "whenever two nations equally advanced in civilisation are brought into close contact, the language of the most numerous will prevail. When however a small body of invaders brings a higher civilisation with them, the converse is more likely to happen." The Roman conquest of Britain seems an exception to this rule. But, though it brought a higher civilisation than it found, and so might have been expected to establish a Latin dialect permanently, it involved, like the Norman conquest, no great shifting of population; it was, in fact, more a military occupation than an immigration. In Gaul and Spain, on the other hand, the natives had a better chance of acquiring the Roman culture, and Latin had a better chance of establishing itself among them. For not only did the Roman occupation begin at least a century earlier, but Gaul and, in a sense, Spain were nearer to the centre of civilisation. When therefore the later invaders of Gaul and Spain, such as the Franks, Burgundians, and West-Goths, entered these countries, they found a higher general civilisation than the English found in Britain and also a more firmly established dialect of Latin. It is moreover probable that in the case of Britain the Germanic invaders bore a somewhat greater proportion numerically to the conquered race than in the case of Gaul and Spain.

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[1] *Principles of Comparative Philology*, p. 167.

Differentiation of Latin dialects.

Parallels in English.

At first these Roman languages, as spoken in the towns, differed but little from the Popular Latin whence they were derived (see p. 113). In the less Romanised districts the original Celtic and Iberian died harder, but were probably extinct by 500 A.D. Meanwhile the Latin dialects which ousted them gradually diverged from one another as they became less the official language and more the language of the people. If we want a parallel to the divergence of Gallic Latin (or Gallo-Romanic) from Spanish Latin (or Hispano-Romanic), we should compare the divergence of English as spoken (1) by descendants of Englishmen in America and by descendants of Englishmen in Australia, (2) by two non-English races such as the African negroes of America and the Chinese. The English of the American differs from the English of the Australian, and Negro-English differs from Pidgin-English; but in the latter case the difference is far wider. The American Negro's language and the Pidgin-English of the Far East are the result of non-English races[1] trying to speak English, whereas American English and Australian English are mere local varieties of the same language spoken by the same race in different parts of the world. The Romance Languages were produced by these two forms of divergence working together.

Gallo-Romanic is found at an early stage divided into local dialects. These are classed under two main heads:—

(1) The Langue d'oc of Southern Gaul and North-Eastern Spain,

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[1] It is not of course the race which is the important thing here, but the phonology and grammatical structure of the language originally spoken by the race.

(2) The Langue d'oïl of Northern and Central Gaul (ousted in the North-Eastern district by Low German, represented nowadays by Flemish).

Oc and *oïl* were the words for 'yes' in the two groups,—*oc* from *hoc*, and *oïl* (modern French *oui*) a compound of *o* (from *hoc*) and *il* (from *illi*). (1) The chief dialects of the Langue d'oc are Gascon, Provençal, and Catalan, the last being the language of Catalonia in Spain. (2) At the time of the Norman Conquest of England the Langue d'oïl included among others Norman-French and the French of the Île-de-France, the district round Paris. The former was brought over to England by the Normans; the latter began to influence our language after the accession of Henry of Anjou (see p. 119).

Norman-French and French of Paris.

The rise of the Standard Dialect of French, originally the French of Paris[1], is exactly parallel to the rise of Standard English, originally London English. The necessities of political and commercial intercourse demanded a common dialect, and the dialect of the political and commercial centre became the standard dialect of the country. As with English, however, the other dialects descended from Gallo-Romanic have survived in the spoken language, some of these, e.g. Provençal, having a considerable modern literature.

Standard French.

Our own language belongs to the Western Branch of the Germanic or Teutonic Group. It was probably identical with Frisian at the time

History of English.

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[1] Cf. Chaucer, *Prologue to the Canterbury Tales*, l. 124:

'And Frensh she spak ful faire and fetisly
'After the scole of Stratford atte Bowe,
'For Frensh of Paris was to hir unknowe.'

of the English invasions of Britain, and hence is known at that stage as Anglo-Frisian. It has closer affinities with Dutch and Flemish and Old Saxon than with Modern German, and has therefore been classed with them as the Low[1] German subdivision of Western Germanic.

The Britons.

At the beginning of our era the inhabitants of Britain spoke a Celtic language. The Roman occupation lasted from the conquest in the first century to the withdrawal of the legions in 411. Though the population of the towns doubtless remained largely Roman or half-Roman, the Romans did not succeed in imposing their language upon the Britons as they did upon the Gauls and Spaniards. Traces of their occupation, however, are found in the place-terminations *-wick* or *-wich* (*uicus*) as in *Alnwick*, *Norwich*, and *-caster*, *-cester*, or *-chester* (*castra*) as in *Lancaster*, *Gloucester*, *Manchester*. The other early borrowings from Latin, *mile* (*milia passuum*), *street* (*strata uia*), *wall* (*uallum*), *pepper* (*piper*), *cheese* (*caseus*), *silk* (*sericum*), *pound* (*pondo*), *mint* (*moneta*), and a few others, came to Britain with the English.

Latin loan-words.

The English Invaders.

In the 5th century Britain was partially conquered and settled by the Angles, Saxons, and Jutes, who came from Northern Germany and Southern Denmark. The earliest record of the language, the poem *Beowulf*, may have been composed before the conquest of Britain, when English and Frisian were identical. As the Germanic settlers comprised several distinct tribes it is natural to find varying dialects. These have been placed in four groups:—

Beowulf.

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[1] So called as belonging to the Lower or more Northern part of the valleys of the Rhine and the Elbe.

(1) Northern,
(2) Midland,
(3) Southern,
(4) Kentish.

Caedmon, Alfred.

The Northern dialects are represented in literature by Caedmon, the Southern by Alfred; from the Midland, modern Standard English[1] is descended. Lowland Scotch, the language of Burns, is a modern representative of Northern English, which was spoken from the Humber to the Forth.

Celtic Elements.

Except in Wales and Cornwall the Britons were gradually absorbed by the invading race, but the modern English words derived from their language are few and uncertain. The best instances are perhaps *dun* (the colour), *mattock*, and the place-termination *-combe* ('valley') as in *Wycombe*. A few other Celtic words, e.g. *brat*, came through the Irish missionaries who settled in Northumbria about 650.

Church-Latin.

With Christianity in the 7th century came a considerable number of Latin (some originally Greek) words, especially Church words such as *bishop* (*episcopus*), *candle* (*candela*), *church* (*κυριακόν*), *devil* (*diabolus*), *priest* (*presbyter*), *temple* (*templum*): others are *lily, pear, sickle, sock, trout.*

Scandinavian Elements.

The Danes or Norsemen, whose incursions began in the 9th century and who ruled the country, wholly or in part, from 878 till 1042, brought a number of Scandinavian words, e.g. *they, them, their, sister, skin, sky, egg, law, knife, give, take,* and name-terminations such as the patronymic *-son* as in *Robinson* and the place-suffixes *-by, -thorp, -thwaite, -toft,* as in *Whitby, Althorp, Braithwaite, Lowestoft.*

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[1] i.e. the 'educated' dialect of Southern England.

Norman-French Elements.

Norman influence on the language may be said to have begun with the accession of Edward the Confessor in 1042. The Conquest (1066–1071) brought over a Norman aristocracy, speaking a dialect of Old French. From this date the language of the court, the law, and the schools was Norman-French, and English became almost a peasants' dialect. Indeed, though both languages continued to be spoken, the distinction between the two was so marked that more than two centuries passed before English became influenced to any considerable extent by French.

French of Paris.

In 1154 the accession of Henry of Anjou brought the beginnings of a new influence, the literary French of Paris. The contrast between words derived from Norman-French and the importations from Paris-French is seen in the doublets *catch, chase*; *warden, guardian*; *launch, lance*; *wage, gage.* The influence of French has been continued without a break to the present time. Not only have true Old French words like *court, judge, tax, county, rent, sir, captain, army, preach, labour, feeble,* derived mostly from Late Latin, been imported largely into English, but there has been an enormous influx of words taken from Literary Latin by learned Frenchmen. Latin was kept up among scholars throughout the Middle Ages, and even before the Revival of Learning many Latin words came into English through French channels. In the 15th century, especially in the last quarter of it after the introduction of printing, many books were translated into English from French translations. It soon became customary among English scholars to adopt Latin words direct in the forms they would have taken in

'Learned' French.

'Learned' Latin.

French, and it is now often impossible to distinguish Latin loan-words from Latin-French. Such 'learned' words form nowadays a very large part of the language, and are easily recognisable. A few instances are *captive, scribe, regal, monarch, monument, secure, separate, memory, pious,* and the nouns in *-tion,* such as *nation.*

The London Dialect.

The supremacy of French as the official and aristocratic language remained unchallenged till about 1250. The first official use of English is found in a proclamation of Henry III in 1258. A century later French had practically gone out of use in England. Henry III's proclamation is written in what is known as the London Dialect, which is mainly Midland English but includes some Southern forms. It is the language used in the following century by Wyclif and Chaucer, and from 1500 onwards is the only dialect used in writing in England. In Scotland, however, the Northern Dialect remained for some time independent as a written language, and as a spoken language still survives among the lower classes like any other dialect of English. The extension of the London Dialect was due largely to the political centralisation which took place under the earlier Tudors, and the increase of the area over which any speaker of English required to be understood. The introduction of printing in 1477 and the consequent wider circulation of books, particularly of Tindal's Bible, published between 1526 and 1530, aided greatly in its establishment as the Standard Dialect.

Wyclif, Chaucer.

Tindal.

Historical Division of English.

English is generally divided historically into three periods:

(1) the Old English (or Anglo-Saxon) of Caedmon and Alfred; (700–1100)

(2) the Middle English
of Wyclif and Chaucer; (1100–1500)
(3) the Modern English
of Shakspeare, Johnson, and Macaulay; (1500–1900).

These three periods represent roughly three stages of development, which Sweet[1] sums up as follows:

"Old English may be defined as the period of *full* endings—*mōna, sunne, sunu, stānas*;

"Middle English as the period of *levelled* endings [i.e. endings which have become alike]—*mōne, sunne, sune, stōnes* [all disyllabic];

"Modern English as the period of *lost* endings—*moon, sun, son, stones* = stou̯nz."

The last period may be subdivided thus:—
(i) The Early Modern English
of Shakspeare; (1500–1650)
(ii) The Later Modern English
of Addison; (1650–1800)
(iii) Present English.

Of the third, which is the educated speech of London and Southern England (called, in relation to the other dialects, Standard English), we must recognise two great divisions,
(*a*) Spoken or Colloquial,
(*b*) Written or Literary.

In Literary English we employ many words such as *steed, realm, dwell, azure, phantom, might* (= 'strength'), which are never used in conversation except when the speaker employs the mock-heroic style, i.e. speaks the Written Dialect. Literary words are often words which have once been colloquial but have become obsolete. Words otherwise obsolete colloquially are used in proverbs, as *casting pearls before swine* for *throwing pearls in front*

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[1] *New English Grammar*, Part I. p. 211.

of pigs, and in set phrases like *bite and sup*, *victuals and drink*, *goods and chattels*.

We have seen that our language contains foreign elements derived from the following sources:

(1) Popular Latin—
  (*a*) as the result of contact with Rome before the migration to Britain,
  (*b*) as a legacy of the Roman Occupation of Britain; (4th and 5th Cent.)
(2) Celtic of the Britons, after the English invasions; (5th and 6th)
(3) Popular Latin, after the introduction of Christianity; (7th)
(4) Scandinavian, after the Danish invasions; (10th and 11th)
(5) Norman-French, after the Norman conquest; (11th and 12th)
(6) Old French of Paris, after the accession of Henry of Anjou; (12th and 13th)
(7) Literary or Classical Latin—
  (*a*) through 'learned' French; (after about 1300)
  (*b*) direct; (after about 1450).

Besides these, many words, especially in the Modern English Period, have been adopted from various sources, as commercial enterprise has taken Englishmen further and further afield.

From Low German sources we have, e.g. *deck*, *skipper*, *sloop*, *yacht*, and probably *boy* and *girl*;

from Italian	*balcony*, *archipelago*;
from Spanish	*sherry*, *peccadillo*, *alligator*;
from Portuguese	*binnacle*, *cocoa*;
from Indian languages	*ginger*, *sugar*;
from Persian	*chess*, *peach*;
from the Slavonic Branch	*polka*, *ukase*, *vampire*.

From Non-Aryan languages we have, e.g.

from Hebrew	*amen, paschal*;
from Aramaic	*damask, damson*;
from Arabic	*admiral, elixir, algebra, alcohol, cotton, amber*;
from Turkish	*bosh, ottoman*;
from Hungarian	*sabre, hussar*;
from Malay	*amuck, gong,* and probably *orange* and *lemon*;
from Chinese	*tea*;
from Australian	*kangaroo*;
from Polynesian	*taboo*;
from African	*oasis*;
from North American	*toboggan, wigwam*;
from Mexican	*chocolate, tomato*;
from West Indian	*canoe, hurricane, potato*;
from South American	*alpaca, quinine, tapioca.*

It should be understood that many of these words have come into English through other languages, while some, especially names of foreign animals or merchandise, have come direct.

English essentially Germanic.

The majority of these loan-words are nouns, but there is also a large proportion of adjectives and verbs, especially from Latin and French. In point of structure and inflexion, however, and the simplest and most necessary part of the vocabulary,—the auxiliaries, the pronouns, the numerals, and most of the commonest nouns,—our language is almost entirely Germanic, i.e. it is essentially the language brought over from Lower Germany by the Angles and Saxons.

'True' English and adopted words.

The student must be careful to distinguish in the following chapters words which are truly English by descent and words which have been adopted from other languages, particularly as a 'true' English word like *father* and a borrowed word like *paternal* are often to be traced ultimately to the same source, though they come into modern English by totally different channels. Other instances of this are—

sweet and *suave*,
feather and *pen*,
three and *triple*,
kind and *gentle*,
frozen and *frigid*.

Grimm's Law (see Chapter VIII) is concerned only with the Germanic or true English element in our language.

CHAPTER VI.

CHANGE.

Facts of Change—Causes—Classification—A. *Change in Sound*—Sensations of Speech—Varieties of Pronunciation—Isolation—Imperfect Imitation—Subdivision of Sound-Changes—(*a*) Internal—Assimilation—Relative Stability of Sounds—(*b*) External—Popular Etymology—Misunderstanding—Mixture of Races—Retarding Influences—Further Examples in English—Phonetic Laws—B. *Change in Meaning*—Definition of Meaning—Variations according to Speaker and Context—Isolation—Occasional and Usual—Extension by Metaphor—Change in Transmission to new generation—Divergence and Convergence—*Analogy*—Its Cause—Grammar—Association Groups—Classification of Analogy—A. *Formative*—'Bad Grammar'—New Inflexions—Analogy in Children—Wrong Division—Analogy in Pairs of Words—B. *Syntactical*—'Split' Infinitive—Habitual Present as Future—Other Examples—Analogy in Gender—*Contamination*—(1) in Form and Meaning—(2) in Syntax—Attraction—Quotation from M. Bréal.

Facts of Change.

In the preceding chapter we saw that we have grounds for believing most European and some Asiatic languages to have been derived from one source. Not only do groups of words meaning 'mother,' 'two,' 'stand,' 'bear,' etc. in the various languages show striking similarities, but the history of individual languages from their earliest to their latest records shows that they have undergone in the lapse of centuries considerable change. Alfred said *mōna* where we say *moon*, Plautus said *faxo* where Cicero said *fecero*, Thucydides said[1] ξύν (ksün) where Demosthenes said σύν (sün). We have arrived, then, at the fact that changes in language have taken place; the question now before us is how they have done so.

Causes of Change.

Classification of Changes.

In spoken language a word may be considered from two points of view, its Sound and its Meaning. The phenomena of Change fall under these two heads. The word which Alfred pronounced *mōna* we now pronounce *moon*; to Alfred this word had but one meaning, 'the satellite of the earth,' to us it can have two, (1) 'the satellite of the earth,' (2) any satellite, as 'one of Jupiter's moons.'

A. First, as to Change in *Sound*.

Change in Sound.

Sensations of Speech.

When we speak we experience two kinds of sensation,

(1) we feel the Position of the organs of speech,

(2) we hear the Sound we make.

Reaction of Ear upon Voice.

By repetition we acquire a permanent, though unconscious, mental impression or memory-picture of (1) the Position, (2) the Sound. We also hear other people producing what is intended to be the same sound. This hearing of other people reacts upon the permanent memory-picture already in our minds. Hence, if we go into a new linguistic environment, e.g. from a Scotch to an English school, our pronunciation tends to become assimilated to that of the majority.

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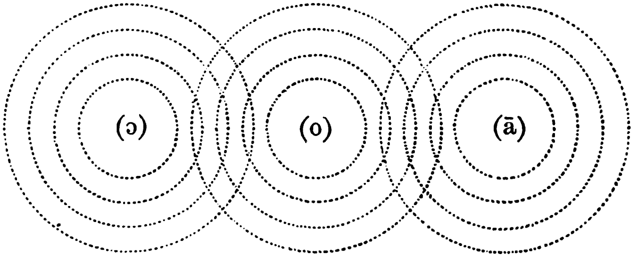
[1] Or perhaps, more accurately, 'wrote' (see page 99).

Now the number of possible vowel-sounds is theoretically indefinite. Hence each vowel, such as the *a* in *man*, the *ō* in *note*, and the *ā* in *father*, may be regarded as a class of sounds varying according to personal or dialectic peculiarities. Thus the *aw* (ɔ) in *law*, the (o) in *hot*, and the (ā) in *father*, might be represented thus, each circle of dots indicating possible pronunciations of the vowel in its centre:—

Varieties of Pronunciation.



In some speakers the (o)-sound varies in the direction of *aw* (ɔ), in others in the direction of (ā), e.g. some pronounce the word written 'dog' somewhat like *dawg* (dɔg), others somewhat like *dahg* (dāg)[1].

The variation observed in the pronunciation of vowels has its parallel in that of consonants. But the variation here is not so marked, the consonant-sounds being acoustically more distinctive.

Everyone knows how differently various speakers, not only of the same community, but of the same 'dialect-stratum' of the same community, pronounce what is called the same sound. More than this, with a little attention we may notice occasional variations in the same speaker, especially when he is addressing a member of a different

Sound-Change in Individuals.

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[1] A familiar instance is the varying pronunciation of the word *God*.

Isolation.

Imperfect Imitation.

dialect-stratum. For instance, a shopkeeper uses different pronunciations in speaking (1) to a duchess, (2) to another shopkeeper, (3) to a tramp. Now if we may imagine a shopkeeper to cease to have occasion to speak to anyone but shopkeepers, the variation in his pronunciation will obviously be greatly reduced. He will speak in only one of the three ways he employed before, i.e. a change in his individual pronunciation will have occurred by the *Isolation* of one of his three varieties of pronunciation. Sound-change may be observed, then, in the pronunciation of single individuals. It also takes place in the course of the transmission of the language from parents to children. A child imitates the Sound, not the Position of the organs required to produce it, i.e. imitation is acoustic rather than organic. Consequently his imitation may not be organically (structurally) correct. To take an instance, a century or two ago the colloquial pronunciation of *shall not* (*shall* doubtless being pronounced to rhyme with the French *mal*) may have been *shālnt* (ṣālnt). A child imitating this might get as near as he could with *shā̆'n't* (ṣānt). If he found this understood, and if neither correction by his parents nor fear of ridicule made him say *shālnt*, he would certainly continue to say *shā̆'n't* as the easier of the two[1]. By a similar process the word written *know*, which would not have been so written if the *k* had not been pronounced, first became (nhōu̯), a breathed *n*, and then (nōu̯), a voiced *n*, as we pronounce it now. So too we find *otto* in Italian from the Latin *octo*, *γίνομαι* in later Greek for the earlier *γίγνομαι*, *accedo* and *nosco* in Latin for *adcedo* and *gnosco,* and in careless colloquial English *reconise* (rekənɐi̭z) for *recognise.* Laziness and imperfect imitation are responsible for all these changes.

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[1] In reality the *l* probably disappeared before the *o*. Cf. Beaumont and Fletcher, *Knight of the Burning Pestle*, Act IV. Sc. 5, 'sha'not.'

Sound-Changes are classed thus:—

Subdivision of Sound-Changes.

(i) Internal, the changes due (1) to the acoustic qualities of the sound, i.e. the resemblance to the ear of such sounds as *f* and *th* (þ), (2) to the tendencies natural to the organs of speech, e.g. assimilation of a voiced consonant to a breathed consonant, and vice versâ (see below),

(ii) External, the changes connected with the expression of ideas.

Internal.

(i) Instances of Internal Sound-Change are seen in breath and voice assimilation, i.e. if a breathed consonant is combined with a voiced consonant they tend to become either both breathed or both voiced. Thus we pronounce *cats* (kæt*s*) but *dogs* (dog*z*); similarly *news* is (nyūw*z*), but *newspaper* (nyūw*s*-pei̭pə).

Assimilation.

We may compare in dialectic English *blackbird* pronounced (blægbəd). In the same way the village of Buckden is locally called *Bugden* and was at one time so spelt, while Rushden is known by its inhabitants as (Ruẓdn̥) (ẓ=*s* in *measure*). Similar tendencies are seen in combinations of dental (or alveolar) nasals with palatals. Thus we pronounce *come in* (ˈkɐm in), but *income* is more usually pronounced (ˈiɵkɐm) or (iɵkm̥) than *(inkɐm) or *(inkm̥), the alveolar *n* becoming (ɵ), palatal, before the palatal *k.* Similarly the labiodental *v* in *seven* (sevn̥) tends to change the alveolar (n̥) to the labial (m̥), while the German *lieben* is often pronounced (lībm̥) rather than (lībn̥). Again, *y* (e.g. in *yard*) is a palatal consonant; hence *s* followed by *y* tends to become *sh* (ṣ), because (ṣ), cerebral, is one step nearer in Place to *y* than *s*, alveolar; hence the pronunciation of *sugar, sure* (ṣugə, ṣūə), for (syugə, syūə). For a like reason the German *ich* is pronounced (iχ), but *ach* (ax).

Relative Stability of Sounds.

In this connexion it should be noticed that some sounds are naturally less stable, i.e. more liable to change, than others. Thus a Mid Vowel like (ā) in *father* is unstable because it can be modified, according to the adjacent sounds, either backwards to (ō) in *note*, or forwards to (e) in *men*. Long vowels are generally less stable than short, because the longer the sound the more temptation to modify it. From these considerations we should expect the short Front Vowels to be the most stable, and this seems to be the case. The *i* in *wit* is a short Front Vowel and has been preserved from the original Aryan.

External.

(ii) We now come to External Sound-Change. Under this heading come changes which are due to Popular Etymology. It is a matter of common observation that a word (or phrase) borrowed from a foreign language or for any reason unfamiliar, a word which has no intrinsic or derivative meaning to the speaker, is altered by him to a word that has such a meaning. Thus *asparagus* becomes *sparrow-grass*, and the *rose des quatres saisons* is known to gardeners as the *quarter-sessions rose.* Similarly *haricot veins* for *varicose veins.* In the phrase *to shoot rubbish* we are really employing the French word *chûte*, which has nothing to do with shooting. *Train-oil* has no connexion with railway trains, but is cognate with the German *Träne* 'a tear.' *Sweetheart* is for *sweetard*, the suffix being the same as in *niggard, sluggard, coward.* Somewhat similar is the change of the inn-sign *The*

Popular Etymology.

Bacchanals to *The Bag of Nails,* and others of the same type[1].

Misunderstanding.

The misunderstanding of a phrase will often lead to change of form (sound). In *Robinson Crusoe* Defoe speaks of 'paying out the cable to the *better* end,' i.e. as far as it will go; we now speak of the '*bitter* end.'

Mixture of Races.

Sound-Change of all kinds is largely brought about by Mixture of Races. In a foreign country, though we may never have seriously studied the language, we can get along very fairly by using the bare stems of words without troubling ourselves with the inflexions. It is a frequent matter for surprise that naturalised foreigners continue to make the simplest grammatical mistakes in English after speaking the language for years. The fact is that words are for communication, and as long as they serve their purpose we are generally content. It is therefore easily intelligible that a large influx of foreigners should give rise to a new simplified dialect of the native language used as a means of communication between the new-comers and the natives. This new dialect would naturally react upon the language spoken by the natives among themselves, and intermarriage would help to render the changes permanent. This was actually the case with the Danish invasions of England (see p. 118).

Retarding Influences.

We have seen some of the reasons for Sound-Change. The next question is, Why do not changes take place so rapidly as to make a language entirely different in the course of a few generations? It is because working side by side with the disintegrating tendencies there are conservative tendencies. Most English children in imitating *three* say *free*. The reason that *free* does not become the standard pronunciation when the older generation passes away is that the great majority of speakers with whom the child comes in contact say *three*, and the pronunciation *free* is not near enough to *three* to avoid the risks of being misunderstood, corrected, or ridiculed. Moreover, in this connexion, the phrase 'the older generation passes away' is misleading. Generations always overlap. The phrase could only be accurate here if every human being were married at the same age and in the same year, produced the same number of children in the same time, and died at the same age, as every other human being—and this had been the case from the beginning[1].

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[1] Popular Etymology will sometimes, in the case of names and titles, give rise to myths intended to explain them; a familiar instance is Ἀργειφόντης.

Thus in language, as in politics, there are two great influences at work, the one reforming, the other conservative. The history of language, or rather, the fact that there is such a thing as the history of language, shows that the reforming influence always wins in the long run. Still, if the disintegration goes too far in one department, so as to endanger the fitness of a language to communicate ideas, there is a conservative reaction in another department. Thus the reforming influence in English has thrown off most of the Old English inflexions, but the change is compensated by an increased fixity in the order of words in a sentence.

Compensation for disintegration.

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[1] The spelling, too, probably has some influence in checking the change, though not much. *Sha'n't* was near enough acoustically to *shal'n't* or *sha'not* to avoid the above-mentioned risks, yet the spelling 'shall not' has been powerless to check the change.

We may add some further examples of Sound-Change in English.

Further Examples.

In Shakspeare we frequently come across lines like

Startles and frights consideration,

where to preserve the metre we have to pronounce the suffix *-ation* as three syllables. Shakspeare's ear would never have allowed this, unless either the word had this pronunciation in his time or had so recently had it as to permit its use in poetry as an easily intelligible archaism.

-*tion*

In the printed matter appended to drawings by Leech and others in old numbers of *Punch*, the 'swell's' pronunciation of *girl* is represented as 'gurl.' This is now pretty generally recognised as the 'correct' pronunciation, having nearly superseded the older pronunciation *gairl.* Had *gurl* been the recognised pronunciation in Leech's time, he would have used the ordinary spelling 'girl.'

girl

In Boswell's *Life*, under the date 1772, Dr Johnson says that [in 1747] the word *great* was pronounced by Lord Chesterfield to rhyme with *state*, and by Sir William Yonge to rhyme with *seat.* Lord Chesterfield's older pronunciation has persisted. But in *tea* and *sea*, which in 18th century verse are rhymed with *obey* and *away*, Sir William Yonge's newer pronunciation of *ea* has now become general.

great, tea

Change in accentuation is seen in comparing the modern pronunciation with Shakspeare's *canónized, revénue, aspéct, perséver*, and Cowper's *balcóny* in *John Gilpin.* We may also compare lines of Chaucer like

Change of accent.

And smalë fowlës maken melodye,

and *So priketh hem Natúre in her corâges*[1]
('Then nature excites them in their hearts'). Here we notice—

inflexions (*smalë, fowlës, maken, priketh*) now lost or modified,

accents (*Natúre, corâges*) now thrown back,

words now obsolete (*her*=*their*), or only used colloquially (*hem* = *'em*),

words whose meaning has changed (*priketh, corages*).

Phonetic Laws.

The laws which govern Sound-Change are called Phonetic Laws, and it is these laws which it is the chief business of the philologist to discover. Such a law is Grassmann's that in Greek and Sanskrit the same syllable cannot both begin and end with an aspirate (hence θρίξ, τριχός, not θριχός); or Grimm's Law of the changes of the Stops between Aryan and the Germanic Group of Languages (see Chapter VIII.). How far a Phonetic Law is to be regarded as a Law of Nature, is a disputed point. The fact that Phonetic Change is to some extent affected by the human mind seems to put Phonetic Laws beyond the pale of Natural Law in the strict scientific sense. The Laws of Chemistry are true always and everywhere, Phonetic Laws are limited both in time and in area of action.

B. We now pass on to Changes of *Meaning*.

Change of Meaning.

Meaning varies according to (1) the speaker,

The Meaning of a word is the body of associations called up by it. This is never exactly the same in any two speakers. For instance, the word *horse* calls up a different body of associations to a cab-driver, a veterinary surgeon, a biologist, and a horse-painter, respectively. In fact it is with meanings as with sounds; the meaning of a word is really a class of meanings varying according to individual and dialectic peculiarities. The associations in any two cases will be more or less alike in proportion to the similarity of education, experience and social environment in the speakers. More than this, the meaning of a word varies *in the same speaker* according to the connexion in which it is used. When we are shooting, *bird* means a partridge, at an aviary it means a canary, at a poultry-show a barn-door fowl. '*Running* a hurdle-race' is a very different thing to '*running* a flat-race' or '*running* a horse for a race.' Now, supposing for the moment that these three are the only uses of the word *run*, if any two were to go out of fashion owing to circumstances such as the abolition of hurdle-races and flat-races, the remaining use would survive as the only use of the word *run*, or, to put it scientifically, the root-meaning 'run' would have first become extended in three directions and then been narrowed by *Isolation* in one of these.

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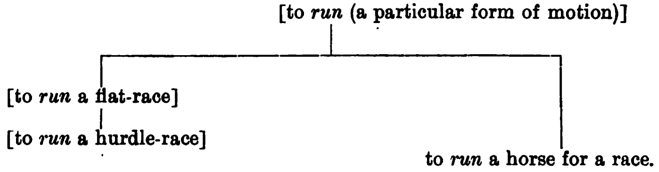
[1] Prol. *Cant. Tales*, ll. 9, 11.

(2) the context.

Isolation of Meaning.

We might illustrate the process thus :—


[to *run* (a particular form of motion)]
[to *run* a flat-race]
[to *run* a hurdle-race]
to *run* a horse for a race.

Occasional use often becomes usual.

station
stamp
wicket

In such a case the transference of meaning would begin with being occasional, and end with being usual. Such is the history of the words *station* in the sense of 'railway-station,' *stamp* in the sense of 'postage-stamp,' and many others. Similarly *wicket* in the sense of a small door within a large gate is practically obsolete in spoken English, while it has survived in its extended use to mean the three stumps at cricket. The same process is going on at the present time in the meaning of the word *motor*. From the meaning of 'an engine worked by electricity,' it has come to mean any small engine, and it is now being gradually isolated, in ordinary parlance, in the meaning of 'light mechanical carriage for travelling on roads[1].'

motor

On the other hand, such extensions of meaning as are seen in the use of *leg* to mean one side of a triangular race-course at sea, or *tail* in the sense of the less valuable members of a cricket team, remain occasional. The last two instances illustrate extension of meaning by Metaphor. A simple example of this may be observed in *I see what you mean*, compared with *I see you*. This form of extension has been discussed already (see p. 8). Words are often isolated in the metaphorical meaning, the original meaning going out of use. Thus *pipe* meant originally a kind of musical instrument; *siege*, a 'seat' or 'sitting down' (Old French); *rascal*, an animal not worth hunting (Middle English); *friar*, a 'brother' (Old French).

leg, tail

Extension by Metaphor.

pipe, siege, rascal, friar

The meaning of words, like sounds, has a tendency to change in passing to a new generation. The use as well as the pronunciation may be 'incorrectly' (i.e. unlike the majority) imitated. Such 'mistakes' would be to apply the word *congregation* to an audience at a theatre, or the word *nightshirt* to a surplice. These are usually corrected either (1) by parents and others, (2) by ridicule,

Change in transmission to a new generation.

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[1] There is a more or less distinct implication that the engine is part of the vehicle.

or (3) by risk of being misunderstood. But it is obvious that if a large number of individuals unite in a misapprehension, the new meaning or group of possible meanings will only partially correspond with the meanings attached to the word by the older generation. This is the first step towards change of meaning by Isolation. The following are examples of changes brought about in this way. The word *skirt* was once identical with *shirt*, a garment so called because it was *short*; it afterwards came to mean the lower part of such a garment or of any garment (cf. the Authorised Version *the skirts of his clothing*, also the verb *to skirt* and the noun *outskirts*), then a lower garment, and finally a lower feminine garment, which is now the usual meaning.

skirt

In Old English *sad*, like the German cognate *satt*, meant 'sated'; in Chaucer it means 'calm,' 'serious'; in Shakspeare 'serious' (cf. 'in good sadness'), 'mournful'; and in the seventeenth century it became isolated in the latter sense.

sad

The original sense of *town* in its Old English form *tūn*, like the German *Zaun*[1], was a piece of enclosed ground; then it came to mean a farm with its buildings; then a village (as still in some dialects); and finally what it means now.

town

Words are often identical in form (spoken or written or both) with quite different meanings. These have either (1) diverged in meaning or (2) converged in form. Instances of the former are *box*, *post*, *crane*. As examples of convergence in form we may notice—

Divergence and Convergence.

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[1] In Modern German *Zaun* means 'hedge.'

bear (verb) from Old English *beran,* and *bear* (noun) from Old English *bera,*

sun from Old English *sunne,* and *son* from Old English *sunu,*

sound (= 'noise') from Old French *son,* and *sound* (e.g. *Plymouth Sound*) from Old English *sūnd,*

mean (verb) from Old English *mǣnan,* to 'intend,' *mean* (adjective) from Old English *mǣne,* 'wicked,' and *mean* (noun) from Old French *meyen* (Fr. *moyen*), Latin *medianus.*

We may add *sight, site*; *father, farther*; *beach, beech*; *pail, pale*[1]; *wreck, reck*; *taper, tapir.*

Sometimes divergence in meaning is accompanied by differentiation in form (sound) or spelling. Thus *of* and *off, to* and *too, person* and *parson,* were once identical, and of the two spellings *insure* and *ensure* the first is generally used in the business sense (*insure against fire*) and the second in the general sense (*ensure success*). Similarly *practise* is used for the verb, *practice* for the noun. Compare also *indite a letter* and *indict a person, O* (vocative) and *Oh* (exclamation), *ton* (weight) and *tun* (capacity). A strange case of divergence of spelling is seen in *Tonbridge* and *Tunbridge Wells.* In *Smith* and *Smyth* (smɐi̯þ) we have divergence of form (sound) following upon divergence of spelling.

Analogy.

We have shown how, and to some extent why, changes in sound and meaning come about. We have still to deal with the greatest change-effecting principle of all.

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[1] In the Eastern Counties educated people make a distinction here; in *pale* the *l* is voiced (pei̯l), and in *pail* breathed (pei̯lh) as in French *table.*

The object of speech is the communication of ideas. But it is more than this. Of two possible ways of doing a thing human nature always, other things being equal, takes the easier. Civilisation itself consists mainly in the invention and use of easier ways of doing things. Gesture can communicate ideas, Speech can communicate them better. Speech, as we saw in Chapter I, was originally an improvement upon Gesture, an improvement because it is less laborious. The object of Speech, then, is not only the communication of ideas, but the communication of ideas in the least laborious way. Hence all labour-saving tendencies are natural to language.

Its Cause.

If we expressed 'I go' by *eo*
'he goes' by *bona*
'we go' by *tum*
and 'they go' by *cupidinibus*

our language would be difficult for a native to master, and practically impossible for a foreigner. There would be no grammar; it would be entirely a matter of vocabulary. Some languages of savage tribes would seem to approximate to this condition, e.g. in Fijian, *buru* means 'ten cocoanuts,' *koro* 'a hundred cocoanuts,' *selavo* 'a thousand cocoanuts.' But fortunately this is exceptional. In the great majority of cases, association of form in a language goes side by side with association of meaning, i.e. words that have something in common in meaning generally have something in common in form. In fact, every language has a grammar, or code of laws not only obeyed but created unconsciously by each individual speaker. In English such laws—or, to use a slightly different metaphor, habits—are (1) to put *-s* at the end of a noun to mean 'more than one,' and (2) to put *-er* at the end of an adjective to mean 'to a greater degree.' These laws are unconscious generalisations formed

Grammar.

by each individual from masses of phenomena. In the first example the mass of phenomena is that of the nouns in English which make their plural in *-s*; in the second, that of the adjectives which make their comparative in *-er*.

Association-Groups.

These masses of phenomena are really association-groups of sound *plus* meaning. It is the tendency of all languages to widen these Association-Groups, that is, to make words which bear associated meanings assume associated forms. This tendency is called Analogy.

We have called Analogy the greatest change-effecting principle of all. It is true that in the long run Analogy acts as a conservative agent in language by securing a certain degree of regularity in its propagation and continuity, but in thus promoting uniformity it often destroys existing words and flexions, and thus more changes are brought about by Analogy than by any other single principle[1].

Analogy classified:

The phenomena of Analogy may be divided into two classes (A) of Form, and (B) of Syntax.

(A) Formative Analogy.

(A) A good example of the way in which Analogy levels incongruities of form (i.e. widens Association-Groups) is seen in the French verb. The present tense developed thus, according to the stress-accentuation in Latin:—

ámō	*aim,*
ámās	*aimes,*
ámat	*aime(t),*
amámus	*amons,*
amátis	*amez,*
ámant	*aiment.*

In Modern French, however, *amons, amez* have been changed on the analogy of the other persons to *aimons*, *aimez*. The same levelling is seen on comparing New Testament Greek with Attic, e.g.:—

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[1] Strong, *Hist. of Lang.* (p. 83), to which I am much indebted throughout this chapter.

οἶδα	*οἶδα,*
οἶσθα	*οἶδας,*
οἶδε(ν)	*οἶδε(ν),*
ἴσμεν	*οἴδαμεν,*
ἴστε	*οἴδατε,*
ἴσᾱσι(ν)	*οἴδᾱσι(ν),*

where, however, the changes are due to the great number of verbs which form their Perfects in *-α, -ας, -αμεν, κ.τ.λ.* Similarly in Latin *lepōsem, honōsem* (nominative *lepōs, honōs*) became *lepōrem, honōrem*, by the Phonetic Law that *s* (z) between vowels changed in Latin at a certain period into *r*. By the beginning of the Silver Age the nominative, in which the law did not hold good, had become *lepor, honor*, on the analogy of the other cases. Cicero, however, wrote *lepos, honos*, and similar forms occur in Vergil. In English, Analogy has nearly succeeded in making all nouns make their plural in *-s*. Thus the Old English plural of *bōc*, 'book,' was *bēc*, just as the plural of *foot* is *feet*; and the plural of *cow* in the Authorised Version is *kine*[1]. The numerals form an Association-Group. Consequently we find them affecting one another, e.g. *ὀκτακόσιοι* instead of *ὀκτωκόσιοι*, on the analogy of *ἑπτακόσιοι*, and *nouem* for *nouen* (cf. *nōn-us* and Eng. *nine*) from *decem*. Similarly the Months are associated in meaning, and hence the form *Octember* occurs, on the analogy of *September*, *Nouember*, and *December*, though it did not succeed in establishing itself.

lepos

books, cows

ὀκτακόσιοι
Octember

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[1] Historically *kine* is a double plural; *kine* represents *ky-en*, *cȳ* in Old English being the plural of *cū*. In Lowland Scotch *kye* is still used for *cows*. Cf. *child, childer, children.*

I'd a' went

'Bad Grammar,' as we call it, is often the result of Analogy. Thus we often hear *took* for *taken* (used also in poetry) and *went* for *gone*, on the analogy (1) of the verbs which make both the past tense and the past participle by adding *-ed*, as

he played,	*he had played,*
he looked,	*he had looked*;

(2) of the verbs which make both in the same way, as

think...thought...thought,
seek...sought...sought.

Similarly *my...mine*, *thy...thine* } hence: { *his—hisn*, *your—yourn.*

Large Association-Groups tend to attract to themselves not only isolated forms (e.g. *kine* becomes *cows*) or the members of smaller groups (e.g. *brothers* for the older *brethren*), but new words in want of inflexion.

New inflexions: *motored.*

Take the new verb *to motor.* In forming its past tense and participle we go through some process like this:—

walk...walked
hasten...hastened
erect...erected
form...formed
etc.
} hence: *motor—motored.*

Sometimes one hears the verb *to mote.* This is formed thus:—

fighter, *seller*, *protector*, *carrier*, etc. } ...'one who { fights, sells, protects, carries,' etc. }

hence:
motor...'one who—motes.'

The analogy here is not quite accurate; if it were, *motor* would mean the chauffeur and not the machine; but compare *boiler*, *driver* (a golf-club), *cooker* ('cooking-stove'), where by a kind of personification *-er* is used for the instrument not the agent.

Analogy in children.

This process is exactly parallel to that of the child learning to talk. He says *runned*, *goed*, *maked*, etc., on the analogy of *walked*, *dressed*, *whipped*, etc., and *badder*, *baddest*, on the analogy of *sweeter*, *taller*, *sweetest*, *tallest*. A child, on being asked where his brother was, has been known to say *He's run-rounding the garden*. This is parallel to such forms as *ἐκάθευδε*, *ἠφίετε* in Classical Greek. Modern Greek has extended this use, e.g. *ἐπροτίμων*, *ἠνόχλησα*. The converse is seen in the Classical *διηκόνουν* for *ἐδιᾱκόνουν* from *διᾱ́κονος*.

The Greek Augment.

Wrong Division.

tobacconist

Μηδίζω

A particular type of Analogy is the Wrong Division of Words (i.e. wrong historically). Thus from *pianist*, *machinist*, *violinist*, etc., we might gather that *-nist* rather than *-ist* was the termination; hence such forms as *tobacconist*. Similarly in Greek the termination *-ίζω* (whence English *-ise*) arose from a wrong division of such words as *ἐλπίζω*, where the real division *ἐλπίδ-yω* is obscured by the change of *δy* to *ζ* (cf. *Ζεύς* from *Dyēu̯s*, whence Latin *Diouis*, *Iouis*), and thus we find such words as *βασανίζω*, Μηδίζω, from *βάσανος*, Μῆδος, and in English such formations as *standardise*, *Anglicise*.

adder, *newt*

μέρα

The same principle has caused in English the formation of *an adder* for *a nadder*, and vice-versâ, *a newt* for *an ewt* (or *eft*), and a few others. An interesting parallel is seen in the colloquial Modern Greek *μέρα* for *ἡμέρα*, the first syllable being confused with the article.

Analogy in Pairs of Words.

It must not be supposed that Analogy works only by majorities. Sometimes, strangely enough, the bond of association in a group is exact opposition in meaning. The group then consists of but two members, of which one tends to become partially assimilated to the other. *Male* is from the French *mâle*, Latin *masculus* diminutive of *mas*; *female* is for *femell*, from the French *femelle*, Latin *femella* diminutive of *femina*. The popular mind felt the opposition in meaning to lie in a single syllable as in the case of *done* and *undone*, *equal* and *unequal*, and made the rest of the word correspond to mark the connexion. In Latin the oldest meaning of *diu* was 'by day' (cf. *interdiu*); this word has changed *nocte* to *noctu*. Similarly in Greek *ἐκποδών* is obviously *ἐκ ποδῶν*, but *ἐμποδών* has no such explanation.

Syntactical Analogy.

(B)[1] Analogy is scarcely less active in the domain of Syntax. For instance, it converts predicates into attributes, thus:—

he is good...*a good boy*
he is bad...*a bad boy* } hence:
etc. etc.
he is good for nothing—
a good-for-nothing boy.

frugi

This is closely parallel to the use of the Latin *frugi*, which was originally the dative of *frugem* with the meaning 'for enjoyment,' 'pleasant,' 'good' (cf. *curae esse*, *bono esse*), and only used predicatively, but was afterwards used as an attribute as well, e.g. *seruus frugi atque integer*. Cf. Plautus *improbe nilique homo*, and the use of *eius modi* = *talis*. Similarly

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[1] For Analogy in Accentuation see the next chapter (p. 151).

drunk, ill, well are properly used only as the predicate (*he is drunk,* etc.) but in colloquial English we now hear *a drunk man, an ill person*[1] for *a drunken man, a sick person,* and a man suffering from a bad leg will speak of the other as his *well leg.*

wicketkept

We sometimes hear nowadays the past tense or past participle *wicketkept, housekept.* These words are formed by Analogy thus:—

$$\left.\begin{array}{l}\textit{keeper...kept}\\ \textit{sleeper...slept}\end{array}\right\}\text{ hence: }\left\{\begin{array}{l}\textit{wicketkeeper—wicketkept}\\ \textit{housekeeper—housekept.}\end{array}\right.$$

πρὸ χρόνου

In Greek Syntax, Analogy is responsible for the occasional use in Attic of εἰ with the subjunctive and ἐάν with the future indicative. In Herodotus and Lucian we find πρὸ χρόνου τινός in the sense of 'some time before.' This has been changed by Analogy from πρὸ χρόνῳ τινί (i.e. 'before by some time'), just as in Latin *ante die tertio Kalendas Ianuarias* became *ante diem tertium Kal. Ian.*

than, like

In English we often say *He is taller than me* instead of *He is taller than I,* giving *than* the construction of a preposition. This has its parallel in *Than whom no greater man existed,* which is reckoned as correct English. Would-be careful speakers have been known to say *like he* as the result of avoiding *as him.* Analogy is mainly responsible for that bugbear of purists the 'split infinitive.' It is formed somehow thus:—

'Split Infinitive.'

$$\left.\begin{array}{l}\textit{It is finished...It is quite finished}\\ \textit{He has finished it...He has quite finished it}\end{array}\right\}\text{ hence:}$$

I hope to finish it—I hope to quite finish it.

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[1] Even Mrs Piozzi in her *Anecdotes of Samuel Johnson* (pub. 1786) speaks of making 'an ill man well.'

This use is doubtless aided largely by the disjunctive use of *to* in *He ought to, I should like to very much, For 'tis their nature to*[1], and similar phrases. Syntactically the split infinitive is no worse than *In the hope of completely routing the enemy* or even *I said to Tom's friend*, and is sometimes found in the best contemporary prose[2]. *Where do we go now?* can strictly be used only of an habitual action, or an action to be done according to regulations. It is frequently used, however, of an action to be done according to any previous instructions or pre-arranged plan, and hence by a further extension it is sometimes used merely as equivalent to *Where shall we go now?* Here the Analogy lies rather in the circumstances or context than in the syntax. The colloquial use of *sort of* is an interesting case of Analogy, e.g.:—

Habitual Present as Future.

sort of

He gave us a sort of lecture } hence: *He sort of lectured us*
He lectured us } or *He lectured us, sort of.*

This is exactly parallel to the use of δῆλον ὅτι and πῶς δοκεῖς in Greek as adverbs. Compare in Latin *nescio quem hominem* for *hominem, nescio quis*, and Tacitus's *adfertur rumor rapi in castra incertum quem senatorem* (*Hist.* I. 29).

A peculiar type of Syntactical Analogy is that of Gender. In Latin all names of trees, though by form they should be mostly masculine, follow the gender of

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[1] Dr Watts (d. 1748).

[2] I have found it in some of the eighteenth century novels, e.g. Richardson's *Clarissa*, and Burney's *Evelina*, and in a metrical translation of a Latin quotation in Holland's Pliny (pub. 1601), p. 589, 'Our land to duly eare.' According to Jespersen *Eng. Lang.* p. 209, it occurs as early as the 14th century.

Analogy in Gender.

arbor. Similarly in French, though *été* (from *aestātem*) belongs by form to the group of feminine nouns in *-té* derived from Latin nouns in *-tās*, it belongs by meaning to the group of the four seasons. *Printemps*, *automne*, and *hiver* being masculine have made *été* masculine.

Contamination.

The last form of Analogy of which we shall speak is that known as Contamination or Blending. This is the confusion of two or more words or phrases, and is seen (1) in words, (2) in Syntax.

In Words: (*a*) in Form,

(1) (*a*) In the Form of words it is found in such comic coinages as *anecdotage* from *anecdote* plus *dotage*, and *squarson* from *squire* plus *parson*. But it is also soberly employed in such words as *electrocution* (*electric* plus *execution*). 'Αμφορεύς for ἀμφι-φορεύς (ἀμφί *plus* φέρω), *idolatry* from εἰδωλολατρεία[1], and the Low Latin *senexter* from *sinister* plus *dexter*, are less conscious formations of the same kind. Similarly we find in inscriptions μισθωσάντωσαν from μισθωσάτωσαν *plus* μισθωσάντων.

(*b*) in Meaning.

(*b*) In the Meaning of words we find confusions such as *burthen* 'a load' with the *burden* of a song (Fr. *bourdon*), *burden* being now used for either; in the same way *tenor* (though in this case it is only a matter of spelling) now does duty for both *tenour* meaning 'import,' 'signification,' and *tenor* in music (Ital. *tenore*).

In Syntax.

(2) In Syntax, Contamination is frequently productive of 'bad grammar,' e.g.:—

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[1] The shortened form originated in Low Latin.

On attempting to extract the ball, the patient began to sink.

She was not one of those who fear to hurt her complexion.

Everyone present took off their hat.

Examples such as these are common in conversation and newspapers, and are sometimes found in literature. One at least became usual, though it is now obsolete. *Farewell* and *Keep thee well* combined to form *Fare thee well.* A good instance of the same thing is seen in Latin in the use of *quisque* and *pars* with a plural verb. This has its parallel in English in such sentences as *A large number were present.* A rapid speaker has been known to say *The band played See the Conquering Hero came,* the past tense *played* changing *comes* to *came.* In Latin the Gerund and Gerundive constructions were sometimes confused, e.g.:—

poenas soluendi tempus }
poenarum soluendarum tempus }

hence: *poenarum soluendi tempus.*

The phrase *in potestatem uenire* was so common that in several passages we find confusions such as:—

quae ne in potestatem quidem populi Romani esset, Liv. ii. 14.

Compare also cases of attraction such as:—

urbem, quam statuo, uestra est, Verg. *Aen.* i. 573,

and the 'Subjunctive because Dependent,' e.g.—

inuitus feci, ut...fratrem eicerem septem annis postquam consul fuisset (for *fuerat*), Cic. *de Sen.* xii. 42.

In Greek we may compare:—

ἔλεγον ὅτι πάντὼν ὧν δέονται πεπραγότες εἶεν (*πάντων* for *πάντα*), Xen. *Hell.* i. 4. 2, *διεκομίζοντο εὐθὺς ὅθεν ὑπεξέθεντο παῖδας καὶ γυναῖκας* (*ὅθεν* for *ἐκεῖθεν οἳ*), Thuc. i. 89,

χαρίζεσθαι οἵῳ σοι ἀνδρί (for *τοιούτῳ οἷος σύ*),

οἴχεται φεύγων ὃν ἦγες μάρτυρα (for *μάρτυς*),

and the occasional confusion between *καίτοι* and *καίπερ*, e.g.:—

καίπερ ἐκεῖνό γε ᾤμην τι εἶναι, Plat. *Sym.* 219 C, and *ἱκανά μοι νομίζω εἰρησθαι, καίτοι πολλά γε παραλιπών*, Lysias 31. 34[1].

Quotation from M. Bréal.

In concluding this brief discussion of the workings of Analogy we cannot do better than quote the words of M. Bréal[2]:—"If unduly pressed, Analogy would make languages too uniform and, in consequence, monotonous and poor. The philologist, the writer, will always, by taste as by profession, be on the side of the vanquished, that is to say of the forms which Analogy threatens to absorb. But it is thanks to Analogy that the child, without learning one after the other all the words of a language, without having to test them one by one, yet attains to mastery over them in a comparatively short time. It is thanks to Analogy that we are sure of being heard, sure of being understood, even if we chance to create a new word. Analogy must therefore be regarded as a primordial condition of all Language. Whether it has been a source of fecundity and clearness, or whether it has been the cause of sterile uniformity, this the individual history of each language alone can teach us."

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[1] Cf. also Grenfell and Hunt, *Oxyrhyncus Papyri*, ii. 237. 8. 30.

[2] *Essai de Sémantique*, Eng. Trans. p. 77.

CHAPTER VII.

VOWEL GRADATION.

Origin—The Vowel Scale—Pitch-Ablaut—Levelling by Analogy—High Grade and Low Grade—Stress-Ablaut—Weak Grade—Quantitative Ablaut—*Examples*:—(1) *e* : *o*—(2) *ē* : *ō*—(3) *ā* : *ō*.

IF we compare respectively

πείθω, *πέποιθα*, and *ἔπιθον*, in Greek,
fīdo, *foedus*, and *fides*, in Latin,
swim, *swam*, and *swum*, in English,
and *binden*, *band*, and *gebunden*, in German,

we cannot fail to be struck by the fact that, disregarding the prefixes and suffixes, we have in each case three closely related words or three forms of one word. In the most important part of the words in each case the consonants remain the same while the vowels vary. The same phenomenon may be observed in other Aryan languages. The principle is known as Vowel Gradation, or, to use the German term, *Ablaut*.

Origin.

As to its origin, the most widely accepted theory is that it is the outcome of Accentuation.

The Vowel Scale.

If we whisper the sound *ee* (ii̯) and then the sound *aw* (ɔ), we find that *ee* sounds a higher note than *aw*. If we whisper *ah* (ā), an intermediate note is produced. A singer finds difficulty in singing *ee* on a low note or *aw* on a high note, while *ah*, as a useful 'all-round' sound, is the most suitable (e.g. in the combination *la*) for trying over a tune without singing the words. Considerations such as these

Pitch-Ablaut.

Greek accentuation often irregular,

owing to Analogy.

High Grade and Low Grade.

point to the remarkable conclusion that every vowel-sound has (in each individual speaker) a particular musical note or pitch in which it is most easily pronounced. It is possible, therefore, to arrange the vowels in a kind of musical scale. (Tennyson acted on this principle—unconsciously, perhaps—when he coined a word descriptive of the sound of a peal of bells, in the phrase 'The mellow lin-lan-lone of evening bells[1]'; cf. *ding-dong*, *tick-tack*.) In this way, it is supposed, the original word *b*^{h}*ere*, for instance, of level Stress and Pitch, i.e. having neither syllable louder or higher than the other, appears in Greek as φερ* when it bears the Pitch-accent on its first syllable (e.g. φέρω), and as φορ* when it bears it on its second syllable (e.g. φορᾱ́) (It should be remembered that a syllable is said to bear the Pitch-accent, when it is uttered at a higher pitch or musical tone than the adjoining syllables.) If we accept this theory, we must admit that in Greek, which unlike most of the dead Aryan languages shows by symbols what the Pitch-accent was, there are more exceptions than regularities. Thus γένος is right but γόνος wrong. The same is the case with τέκος and τόκος, φρένα and φρενός, and many other pairs. But when we remember the enormous power of Analogy to break down dissimilarities and simplify what is complex, we realise that the great mass of exceptions existing in a single language does not necessarily disprove the rule for the whole family. We may take it, then, that if the word or syllable bore the Pitch-accent, it appeared in the *e*-form; if it did not, in the *o*-form. These forms are generally known as the High Grade (*e*) and the Low Grade (*o*).

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[1] From the song *Far—far—away* in *Demeter and other Poems*.

Stress-Ablaut.
Weak Grade.

The third form, having its origin in the *Stress*-accent, is known as the Weak Grade. This Grade is supposed to have originated in absence of Stress, and shows the original word or syllable in its weakest or thinnest form.

Thus we have—

πείθω **πέποιθα** **ἔπιθον**
πατέρα **εὐπάτορα** **πατρός.**

We have taken our examples from what is known as the *e* : *o* series (I). This, for Greek and Latin, is by far the most important.

To this we must add—

II. the *ē* : *ō* series, exemplified by—

τίθημι **θωμός** **θετός** (for *θətός*),

and III. the *ā* : *ō* series, seen in—

φᾱμί (Doric) **φωνή** **φαμέν.**

These three Grades, as they involve a change of vowel, are known as Qualitative. The other type of Vowel-Grade, the Quantitative, is merely a matter of Length, e.g.—

φορά **φώρ**
πατέρα **πατήρ.**

This is probably the outcome of compensation for a lost syllable, i.e. *φώρ* represents an original *bʰŏ́ros*, and *πατήρ* *pətĕ́ros.*

In the following additional examples of the Qualitative Grades we include instances from Latin, but these are more obscure than the Greek owing to the greater vowel-changes peculiar to the language (see pp. 41 and 104 ff.).

[Note: for n̥, m̥, l̥, and r̥ see p. 33.]

HIGH	LOW	WEAK
I. THE *e* : *o* SERIES.		

(i) We begin with the simple vowels, *-e-* : *-o-* :—

-*e*-	-*o*-	-[nil]-
λέγω *lego*, *legio*	λόγος, λογίζομαι *ē-logium*	
στέγω, στέγη, τέγη *tego* (for *stego*)	 *toga*	
τρέπω	τρόπος	ἔτραπον (for ἔτρ̥πον)[1]
πέτομαι, πετεινός *peto*, *penna* (for *pet-sna*)	ποτάομαι, ποτᾱνός (Doric)	πί-πτω, πτερόν, ἐπτόμην
ἔχω (for σέχω)[2], ἐχυρός	ὀχυρός	ἔσχον, ἴσχω (for σίσχω), σχολή
ἕπομαι (for σέq^wομαι)[3] *sequor*	ὀπᾱδός (for σοq^wᾱδος) *socius*	ἑσπόμην
κλέπτω *clepo*	κέ-κλοφα, κλοπή	ἐκλάπην (for ἐκλ̥πην)[1]
πέκω *pec-to*, *pec-ten*	πόκος	κτενός (for πκτενός)
πλέκω *im-plico* (for *im-pleco*), *plec-to*	πλοκή, πλόκαμος	ἐπλάκην (for ἐπλ̥κην)
ῥέπω (for ϝρέπω)[4] *repente*	ῥοπή, ῥόπαλον, ἀντίρροπος (for -ϝροπ-)	ῥαπίς (for ϝρ̥πίς)

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[1] See p. 185. [2] See pp. 164, 178. [3] See p. 176. [4] See p. 183.

HIGH	LOW	WEAK
e : *o* (continued)		
-*e*-	-*o*-	-[nil]-
σκέπ-τομαι, σκέπας	σκοπός, σκοπέω	
τρέφω (for θρέφω)[1], θρέμμα	τέ-τροφα, τροφή	ἐτράφην (for ἐθρ̥́φην), τάρφος
πέδον, πεδά (Aeol. =μετά), πεζός (for πεδ-yός)[2]	πόδα	ἐπί-βδα ('day after the feast,' for ἐπί-πδα)
pedem	*tri-pudium* (for *tri-podiom*), *repudio*	
ἔτεκον, τέκος	τέ-τοκα, τόκος	τίκτω (for τί-τκω)
στρέφω	στροφή	στραφείς (for στρ̥-φέντς)
τρέχω (for θρέχω)[1]	τροχός	
φέβομαι	φόβος, φοβερός	
φλέγω	φλογός, φλογερός	*fulgeo* (for *fl̥geo*)[3], *fulgur*
ψέγω	ψόγος, ψογερός	
ἕδος, ἕζομαι (for σέδ-yομαι)[2]	ὁδός	ἵζω (for σί-σδω)
sedeo	*solium*, *solum*, *solidus*[4]	*sīdo* (for *si-sdo*)

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[1] See p. 164. [2] See p. 182. [3] See p. 185. [4] See p. 174.

HIGH	LOW	WEAK
e : *o* (continued)		

(ii) Next, the *i*-diphthongs, *-ei-* : *-oi-* :—

-ei-	*-oi-*	*-i-*
εἴδομαι (for wείδομαι, Fείδομαι), εἶδος	οἶδα (for woῖδα)	ἰδεῖν (for wιδεῖν), ἴδρις, ἰδέα
	uīdī[1]	*uideo*
λείπω	λέ-λοιπα, λοιπός	ἔλιπον
līqui		*re-liquus*
στείχω	στοῖχος	στίχος
πείθω	πέ-ποιθα	ἔπιθον, πιθανός, πιστός (for πιθ-τός)
fīdo, fīdus	*foedus*	*fidēs, fidēlis*
ἀείδω (for ἀwείδω)	ἀοιδός (for ἀwοιδός)	
λείβω	λοιβή	λιβάς
lībo		
εἶ-μι	οἶ-μος	ἴ-μεν, εἰσ-ι-τήρια
eo (for *ei-o*)		*i-ter*

……

(iii) Next, the *u*-diphthongs, *-eu-* : *-ou-* :—

-eu-, *-ew-*	*-ou-*, *-ow-*	*-u-*
ἐλεύθερος, ἐλεύσομαι (for ἐλεύθ-σομαι)	εἰλήλουθα	ἐλήλυθα, ἦλθον (ἤλυθον)
κέλευθος	ἀκόλουθος (for σm̥-κόλουθος)[2]	

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[1] For Latin ī representing oi̯ after *u*(w), cf. *οἶκος*, *uīcus*.

[2] See p. 184.

High	Low	Weak
e : *o* (continued)		
-*eu*-, -*e*w-	-*ou*-, -*o*w-	-*u*-
σπεύδω	σπουδή	 *studeo*[1]
φεύγω *fūgi*		ἔφυγον, φυγή *fugio*, *fuga*
ζεά (for ζεwά, ζεϝά)	φυσί-ζοος (for -ζοwος)	
πλέω (for πλέwω, πλέϝω), πλεύσομαι *pluit* (for *plewit*)	πλοῦς (for πλόwος, πλόϝος), πλοῦτος	πλῡ́νω (for πλῠ̄ν-yω)[2]
πνέω (for πνέwω, πνέϝω), πνεύσομαι	πνοή (for πνοwή, πνοϝή)	ποι-πνῡ́ω (for ποι-πνῠ̄-yω)[3]
ῥέω (for σρέwω, σρέϝω)[4], ῥεύσομαι *ruo* (for *srewo*)	ἐΰ-ρροος (for -σροwος, -σροϝος)	ἐρρύη, ῥυτός *ob-rutus*
σεῦε (for κyέwε)	σοῦσθε, δορυ-σσόος (for -κyόϝος)[5]	συθείς
χέω (for χέwω, χέϝω), χεῦμα	χοή (for χοwή, χοϝή)	χυθείς, χύτρα, χύσις
γεύω (for γεύσ-ω)		 *gusto*

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[1] The Aryan original was apparently *psteu̯dō*.

[2] See p. 183.

[3] For the reduplication ποι-, cf. ποιφύσσω.

[4] Eng. *stream*; the *t* is peculiar to Germanic and Slavonic.

[5] See p. 182.

HIGH	LOW	WEAK
e : *o* (continued)		

(iv) Next, the Labial compounds, *-em-* : *-om-* :—

-em-	*-om-*	*-m-*, *-m̥-*
βρέμω	*βρόμος*, *βροντή* (for *βρομ-τή*)	
δέμω, *δέμας*	*δόμος* *domus*	*ἐδέ-δμητο* *māteries* (for *dmāt-*)
νέμω, *νέμος* *nemus*	*νόμος* *numerus*	*emo* (for *n̥mo*)
τρέμω *tremo*	*τρόμος*, *τρομερός*	
τέμ-νω, *τέμενος* *tem-plum*	*τομή*	*ἔτε-τμον*, *τμητός*, *ἔταμον* (for *ἔτm̥-ον*)
εἷς (for *σέμς*) *sem-per*	*ὁμός*	*ἅμα* (for *σḿ̥α*), *ἅπαξ* (*σḿ̥-παξ*), *μία* (*σμία*) *sim-plex* (for *sm̥-*)

……………………………………………………………………

(v) Next, the Nasal compounds, *-en-* : *-on-* :—

-en-	*-on-*	*-n-*, *-n̥-*
μένω *maneo*	*μόνος*, *μόνιμος*	*μί-μνω*
μένος *Minerua* (*Menerua* Inscrr.), *re-min-iscor*	*μέ-μονα*, *μοῦσα* (for *μόντ-yα*) *moneo*, *me-mini* (for *memoni*)	*μέ-μαμεν* (for *μέμn̥-μεν*), *αὐτό-ματος* (for *-μn̥τος*), *μαίνομαι* (*μń̥-yομαι*), *μάντις* *mens*, *com-mentus*

HIGH	LOW	WEAK
e : *o* (continued)		
-en-	*-on-*	*-n-*, *-n̥-*
γενέσθαι, γένος, γενέτωρ *genus*, *genitor*, *gens*	γόνος, γέ-γονα	γέ-γαμεν (for γέγν̥μεν), γί-γνομαι, γάμος (for γν̥́μος) *gi-gno*, *(g)nascor*, *genius* (for *gn̥-yos*)
τείνω (for τέν-*y*ω) *teneo*, *tenus*	τόνος	τέ-τακα (for τέτν̥κα) *tentus* (for *tn̥-tos*)
κτείνω (for κτέν-*y*ω)	ἔκτονα, τεκνο-κτόνος	ἔκτανον (for ἔκτν̥ον)
σπένδω, σπείσομαι (for σπένδ-σομαι)	σπονδή *spondeo*	
φρένα	εὔ-φρονος, φρονέω	φρασί, Pindar (for φρν̥σί)
πένθος, πείσομαι (for πένθ-σομαι)	πέ-πονθα	ἔπαθον (for ἔπν̥θον), πάσχω (for πν̥́θ-σκω)
κεντέω, κέντρον *cento* ('patchwork')	κοντός ('pole') *per-contor*	
dentis	ὀδόντος	ὀδάξ (for ὀδν̥́τξ, cf. γνύξ)

……

(vi) Next, the *r*-compounds, *-er-* : *-or-* :—

-er-	*-or-*	*-r-*, *-r̥-*
δέρκομαι	δέ-δορκα, δορκάς	ἔδρακον (for ἔδr̥κον), δράκων, ὑπό-δρα (for -δr̥κ)

HIGH	LOW	WEAK
e : *o* (continued)		
-er-	*-or-*	*-r-*, *-r̥-*
σπείρω (for *σπέρ-yω*)[1], *σπέρμα*	*σπόρος*	*ἐσπάρην* (for *ἐσπρ̥ην*) *spor-tula* (for *spr̥-*)
τείρω (for *τέρ-yω*), *τέρμα* *tero*, *ter-minus*	*ἔτορον*, *τορός*	*τρητός* *trītus*
φέρω, *φέρετρον* *fero*	*φορά*	*δί-φρος*, *φαρέτρα* *fors*, *fortuna* (for *fr̥ts*, *fr̥tuna*)
ἀγείρω (for *ἀγέρ-yω*), *ἀγέρεσθαι*	*ἀγορά*	*ἀγρόμενος*
μέρος, *μείρομαι* (for *μέρ-yομαι*)	*μόρα*, *μοῖρα* (for *μόρ-yα*)	
	μορτός (Callimachus, 'mortal')	*βροτός* (for *μροτός* from *μρ̥τός*)[2], *ἄμ-βροτος*, *μαραίνω* (for *μρ̥-αίνω*) *mors*, *morior* (for *mr̥ts*, *mr̥-yor*)
ἐγείρω (for *ἐγέρ-yω*)	*ἐγρήγορα*	*ἔγρομαι*
φθείρω (for *φθέρ-yω*)	*φθορά*	*ἐφθάρην* (for *ἐφθρ̥ην*)
χείρ, *χερός*, *εὐ-χερής*	*χορός*	*μέχρι* (for *μέτ-χρ-ι*)

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[1] See p. 183.

[2] *ρα* in Aeolic became *ρο*, e.g. *ἐροτός*=*ἐρατός*; *βροτός* is then an Aeolic form which became general, ousting *βρατός* which does not occur.

HIGH	LOW	WEAK
e : *o* (continued)		
(vii) And lastly, the *l*-compounds, *-el-* : *-ol-* :—		
-el-	*-ol-*	*-l-*, *-l̥-*
στέλλω(for στέλ-*y*ω)	στολή	ἔσταλμαι(for ἔστl̥μαι), ἐστάλην
τέλλω (for *q*^w^έλ-*y*ω)	πόλος (for *q*^w^όλος), αἰ-πόλος (for αἰγ*q*^w^όλος)	περι-πλομένων
in-quilīnus, *colo* (for *ínquelīnos*, *quelo*)	*colus* ('distaff')	
τελ-αμών	τόλμα, τολμάω	τέ-τλαθι (for τέτl̥θι), τάλας, ἔτλην, τλητός
	tol-ero, *te-tuli* (for *tétoli*)	*tollo* (for *tl̥-no*), *lātus*[1] (for *tlātos*)
βέλος	βολή	ἐβλήθην, βάλλω (for βl̥-*y*ω), ἔβαλον
πελ-ταστής		πάλλω (for πl̥-*y*ω), πάλμη, παλτός
pello (for *pel-no*)	*pe-puli* (for *pépoli*)	*pulsus* (for *pl̥-tos*)[2]
μέλλω (for μέλ-*y*ω)[3]	ἔμολον, αὐτό-μολος	βλώσκω (for μλώσκω)

Of the two remaining Qualitative series there are comparatively few examples.

II. THE *ē* : *ō* SERIES.

-ē-	*-ō-*	*-ə-*
ῥήγ-νυμι	ἔρρωγα	ῥαγείς
ἀρήγω	ἀρωγός	

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[1] Used as participle of *fero*; *lātus*, 'broad,' is a different word.

[2] The *s* instead of *t* in such forms appears on the analogy of words like *uorsus*, where it represents *tt* (*uort-tos*) by a Latin phonetic law.

[3] See p. 183.

HIGH	LOW	WEAK
ē : *ō* (continued)		
-*ē*-	-*ō*-	-*ə*-
ἵημι (for σί-σημι), ἧμα *sē-men*	ἀφ-έωκα (for -σέσωκα)	ἑτός (for σα-τός) *sa-tus*
χῆρος *hēres*	χωρίς, χώρα	χατέω, χάζω
τί-θημι (for θί-θημι), θή-κη *fē-ci*	θω-μός	θε-τός (for θα-τός) *fa-cio*

III. THE *ā* : *ō* SERIES.

-*ā*-	-*ō*-	-*ə*-
ἔπτᾱν (Doric)	πέ-πτωκε	
ἔβᾱν (Dor.)	βω-μός	
ἵστᾱμι (for σί-στᾱμι), στᾱ́-μων (Dor.) *stā-men*		στά-σις, στα-τός *sta-tus*, *sta-tim*
rādo	*rōdo*	
gnā-rus (for *gnā-sos*), *narro*	γνώ-μη, γι-γνώ-σκω *gnō-sco*, *ignōro* (for *in-gnō-so*)	
πτήσσω (Attic, for πτᾱ́κ-yω)	πτώξ ('hare')	ἔπτακον
nātes	νῶτον	
φᾱ-μί, φᾱ́-μᾱ (Doric) *fā-ma*, *fā-bula*	φω-νή	φα-μέν, φάτις, φάσκω *fa-teor*, *fa-cies*

CHAPTER VIII.

GRIMM'S LAW AND THE EXCEPTIONS TO IT.

Jacob Grimm — His Law Tabulated — *Exceptions* — Grassmann's Law—Verner's Law—English Parallels—Other Exceptions—Examples.

Jacob Grimm.

IN the chapter on Change we discussed the meaning of the term Phonetic Law. Like the Laws of Nature, such as the Laws of Motion formulated by Newton, a Phonetic Law is a generalisation from a mass of phenomena (see p. 134). In 1822, after a long comparison of the vocabularies of Latin, Greek, Gothic, German, English, and other languages, Jacob Grimm formulated his great law of Sound-Change, the law which underlies the different development of the original Stops in Greek and Latin on the one hand and the Germanic languages on the other. For instance, he saw

Greek	Latin	English
δύο	*duo*	*two,*
ποδ-ός	*ped-is*	*foot,*

His conclusions.

and many other groups of more or less obviously kindred words, and comparing other languages arrived at the conclusion that *g* in Greek and Latin appeared as *k* in the Germanic languages, while *d* and *b* in Greek and Latin appeared as *t* and *p* respectively in Germanic. Similarly *k, t, p* are represented in Germanic by *h, th* (þ), and *f* respectively, while Aryan g^h, d^h, b^h, which developed differently in Greek and Latin, appear in Germanic as *g, d,* and *b.*

These changes may be tabulated thus:—

	ARYAN				GERMANIC			
Breathed Stops	k	t	p	become	h[1]	þ(*th*)	f	Breathed Spirants
Voiced Stops	g	d	b	become	k	t	p	Breathed Stops
Aspirated Stops	g^h	d^h	b^h	become	g	d	b	Voiced Stops

For our present purpose we may confine our examples to Greek, Latin, and English, the Classical languages generally preserving the original Stop, and our own being the Germanic language most familiar to us. (The vowel-changes of course do not concern us here, but see chapters VII. and IX.)

	PALATAL	DENTAL	LABIAL
ARYAN STOP	k	t	p
GREEK	*κ*αρδ-ία	*τ*ρεῖς	*π*οδ-ός
LATIN	*c*ord-is	*t*rēs	*p*ed-is
ENGLISH	*h*eart	*th*ree	*f*oot
ARYAN STOP	g	d	b
GREEK	ἀ*γ*ρ-ός	πο*δ*-ός	κύ*β*-ος
LATIN	a*g*r-um	pe*d*-is	—
ENGLISH	a*c*re	foo*t*	hea*p*
ARYAN STOP	g^h	d^h	b^h
GREEK	*χ*ήν	τί-*θ*η-μι	*φ*έρ-ω
LATIN	ans-er (*for* *h*anser)	*f*a-cio	*f*er-o
ENGLISH	*g*oose (*Germ.* Gans)	*d*o	*b*ear

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[1] For purposes of comparison under Grimm's Law the Aspirate is classed as a Breathed Spirant.

(There would seem to be no very clear example of Aryan *b* common to all three languages; for Latin and English cf. *labium*, *lip*, and for Greek and Latin *βάκτρον*, *baculum*.) It will be seen that Greek and Latin agree in preserving the Aryan Stop, except in the case of the Aspirated Stops g^h, d^h, and b^h. These changes are discussed in the next chapter. In comparing *φέρω* with *fero* it should be remembered that *φ* in Classical Attic was not the same sound as *f*, but (roughly speaking) was a *p* followed by an *h* as in *uphold*. The changes of Grimm's Law will be found further exemplified below.

Exceptions.

Theoretically there are no exceptions to a Phonetic Law. Accordingly when certain words were found to violate Grimm's Law philologists began to look about for other laws whose action interfered with it and produced the anomalous forms. The result of their investigations was the discovery of three laws, Grassmann's Law, Verner's Law, and the law that certain combinations are unaffected by Grimm's Law.

(1) Grassmann's Law accounts for such anomalies as:

κιγχάνω	Goth. *gaggan* [pronounced (gaŋan)]	Eng. *go* (Scotch *gang*)
τυφλός		Eng. *dumb*
πίθος		Eng. *body*

Here according to Grimm's Law we should expect the English words to be *ho*, *thumb*, *fody*. Grassmann, however, comparing *ἔχω ἕξω*, *θρίξ τριχός*, and similar pairs, found that in Greek and Sanskrit a syllable cannot both begin and end with an aspirate or aspirated Stop, hence

κιγχάνω	represents	*χιγχάνω*
τυφλός	„	*θυφλός*
πίθος	„	*φίθος*.

(2) Verner's Law explains why in some Germanic words Aryan *k, t, p* are represented not by *h, þ, f,* but by *g, d, b.* The best instances (for English) are words containing Aryan *t,* e.g.:

ἄν-αλτος ('insatiate')	*altus*	*old* (O.E. *eald*)
ἑ-κατ-όν (for *-κη̥τ-*)[1]	*centum*	*hund-red*
κλυ-τός	*in-clutus*	*loud* (O.E. *hlūd*)
χόρτος	*hortus*	*yard* (O.E. *geard*)
ἄδην (for *σάτ-δην,* Epic *ἄδδην*)	*satis*	*sad* (see p. 137).

Here Grimm's Law would give us *olth, hunthred, louth, yarth, sath.* Verner's explanation is that if the preceding vowel in the Aryan word did not bear the accent, *k, t, p* in Aryan became *g, d, b* in Germanic instead of *h, þ, f.* In Greek the original accent is sometimes preserved, e.g. *ἑκατόν, κλυτός*; but this is not always the case. The anomalies however may be reasonably ascribed to Analogy. We have a similar phenomenon in English in such pairs as—

Parallel in English.

exáct (igzǽkt)	*éxecute* (éksikyūt)
anxíety (æɒgzéi̯əti)	*ánxious* (ǽɒkṣəs)
man-of-wár (mænəvwɔ́)	*whereóf* (wheərɔ́*f*)[2]
awáy with him (əwéi̯ wiđ im)	*herewíth* (hiəwíþ),

where, if the preceding vowel does not bear the accent, the breathed *ks, k, f, þ* become the voiced *gz, g, v, đ,* respectively.

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[1] *ἑ-* for *ἁ-*, i.e. *sm̥-*, as in *ἅ-παξ*, *sim-plex*, meaning 'one'; the change was due to contamination with *εἷς, ἑνός*, etc., as in *ἕτερος* for *ἅτερος* (cf. *θἅτερον*). See Chapter IX.

[2] This pronunciation is already giving way to (wheəov, hiəwiđ) on the analogy of *of*, *with* in the far more frequent unaccented position.

(3) The principal exceptions comprised in the third Law are as follows:—

(i) Aryan *sk, st, sp* remain unchanged in Germanic, e.g.:—

ἀστήρ	*star*
στᾱ́λᾱ (Doric)	*stool*
στόρνυμι	*strew, straw*
σπείρω	*spread*
σπαρνός	*spare*
σποργίλος (Ar. *Av.* 301)	*sparrow,*

not *sthar, sfread,* etc.

(By a change peculiar to English, Germanic *sk* becomes *sh* (ṣ), e.g.:—

σκότος	Gothic *skadus*	*shade, shed*
σκάπτω	„ *skaban*	*shave*
σκῦτος	„ *skōhs*	*shoe.*)[1]

(ii) In *kt* and *pt* Germanic keeps the *t*, e.g.:—

ὀκτώ	*eight* (O.E. *eahta*)
σκᾶπτον (Doric)	*shaft*

not *eighth* (ei̯þ), *shafth.*

In the following examples of Grimm's Law and the exceptions to it, and also in the following chapter, forms affected by Grassmann's Law are marked ^{G}, by Verner's Law ^{V}, by the third Law of exceptions ^{III}.

It should be understood that the same word often shows different stages of the Ablaut in the three languages, and sometimes, especially in Latin, appears in a nasalised form (e.g. ὕδωρ, *unda*).

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[1] *sk* in English is the sign of a borrowed word, e.g. *sky* and *skin* (Scand.), *school* from Latin *schola, screw* from O.F. *escroue* (Fr. *écrou*). Contrast *ship* (Eng.) with *skipper* (Dutch).

k.

GREEK	LATIN	ENGLISH
ἐπί-κουρος (for -κορσος)	*curro* (for *cr̥so*, p. 179)	*horse*
κάλαμος	*culmus*	*haulm* ('stalk')
καλέω	*calo*, *Kalendae*	*hale*, *haul*
κάνναβις	*cannabis* (from Greek)	*hemp* (O. E. *henep*, an early loan-word)
κάπτω, κώπη	*capio*	*haft*, *heave*
κέρας	*ceruus*, *cornu*	*hart*, *horn*
κίω, κῑνέω	*cieo*, *citus*	*hie*
	clāmo	*low* (O.E. *hlōwan*)
κλάζω, κλαγγή	*clango*	*laugh* (O.E. *hlehhan*)
κλέπτω	*clepo*	*shop-lifter*$^{\mathrm{III}}$ (cf. Goth. *hliftus*)
κλίνω, κλῖμαξ	*in-clīno*, *clīuus*	*lean*, *ladder*, *Lud-low* (O.E. *hlǣnan*, *hlǣder*, *-hlǣw*)
κλυτός	*in-clutus*	*loud*$^{\mathrm{V}}$ (O.E. *hlūd*)
κνήμη, κνημίς		*ham* (for *hanm*)
κρῑ-νω	*crī-brum*, *cerno*	*riddle* ('sieve') (O.E. *hrīdder*)
κύρτη ('creel')	*crātis*	*hurdle*$^{\mathrm{V}}$
κύτος	*cutis*	*hide*$^{\mathrm{V}}$
κώμη		*home*, *Old-ham* (O.E. *hām*)
κῶνος	*cōtis*, *catus*	*hone* (O.E. *hān*)
λευκός, λύχνος (for λύξνος)	*lūcis*, *lūceo*, *lūna* (for *lūc-sna*)	*light* (O.E. *lēoht*)
ὀκτώ	*octō*	*eight*$^{\mathrm{III}}$ (O.E. *eahta*)

t.

GREEK	LATIN	ENGLISH
κρατύς, κάρτα		*hard*$^{\mathrm{V}}$
ὀ-δόντος[1]	*dentis*	*tooth* (cf. Goth. *tunþus*)
	mentum	*mouth* (cf. „ *munþs*)
πετάννυμι	*patulus*	*fathom*[2]
τανύ-γλωσσος	*tenuis*	*thin*

---

[1] See p. 188.

[2] 'Space covered by the extended arms.'

GREEK	LATIN	ENGLISH
τέκνον, τόκος, τίκτω (for *τί-τκω*)		*thane* (O.E. *þegen*, from *þīhan* 'to grow')
τέρσομαι, τερσαίνω	*terra* (for *tersa*), *torreo*, *ex-torris*	*thirst*
τι-τρώσκω, τέρετρον, τείρω, τρητός, τόρνος	*tero*, *trītum*, *terebra*	*thrill* (O.E. *þyrlian* 'to pierce'), *throw*, *through*
τήκω (Attic)	*tābes*	*thaw*
τλῆναι, τόλμα, τάλας, τελαμών	*tuli*, *tollo*, *lātum* (for *tlātum*)	*thole* ('to endure')
	uentus	*wind*$^{\mathrm{V}}$ (Scand.)
p.		
ἀπό	*ap-erio*; *ab*$^{\mathrm{V}}$	*off*; *of*$^{\mathrm{V}}$ (p. 165)
δί-πλαξ, πλέκω	*du-plex*, *im-plico*	*two-fold*, *flax*
ἑπτά (for *σεπτḿ̥*)	*septem*	*seven* (O.E. *seofon*)
καρπός	*carpo*	*harvest* (O.E. *hærfest*)
πᾱ́ομαι	*pānis*, *pāsco*, *pābulum*	*food*, *feed*, *foster*
παρά, πρίν, πρό, πρός, πρῶτος, πρέσβυς	*prō*, *prae*, *prīmus*, *priscus*, *pristinus*	*for*, *from*, *first*, *before*, *for-give*, *foretell*
πατήρ	*pater*	*father* (O.E. *fæder*$^{\mathrm{V}}$)
παῦ-ρος, παύω	*pau-cus*, *pau-per*	*few*
πεῖρα, πείρω, πόρος	*perīculum*, *ex-perior*, *portus*	*fear*, *fare*, *ferry*; *ford*$^{\mathrm{V}}$
πενθερός$^{\mathrm{G}}$('connexion by marriage'), *πεῖσμα* (for *φένθσμα*)$^{\mathrm{G}}$	*offendix* ('band')	*bind*, *bond*, *bundle*; *band* (Scand.)
πέντε (for *πέν*q^{w}*ε*, p. 175)	*quinque* (for *penque*[1])	*five*[1] (cf. Germ. *fünf*)

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[1] Apparently by assimilation of the *p* to the *qu* of the latter syllable; this assimilation may have been assisted by the proximity (in counting) of *quattuor*. The second *f* in O.E. *fīf* (instead of *h*, see p. 175) is also due to assimilation. For Assimilation see p. 129. For the change of *e* to *i* before *ŋ* in Latin, cf. *τέγγω*, *tinguo*, and *sinciput* for *sēŋcaput*, i.e. *sḗm*(*i*)-*caput*; cf. also our pronunciation of *England*.

GREEK	LATIN	ENGLISH
πέρᾱ, περί	*per, per-saepe*	*far* (O.E. *feor*)
πλέω (*πλέϝω*), *πλώω*	*pluit*(for *plewit*), *plōro*	*flow, flood, fleet*
πλίνθος		*flint* (?)
πολιός, πελιδνός	*pullus, pallidus*	*fallow-deer*
πόρκος	*porcus*	*farrow* (O.E. *fearh*)
πῦρ, πυρρός	*pūrus*	*fire*
πῶλος	*pullus* (for *pl̥nos*)	*foal*
ὑπέρ[1]	*super* (*s-uper*)[1]	*over* (O.E. *ofer*)

……

g.

ἀ-μέλγω[2], *βουμολγός*	*mulgeo, mulctra*	*milk*
γελάω, γλήνη, γαλήνη		*clean*
	gelu	*cold, cool*
γί-γαρτον (‘grape-stone’)	*grā-num*	*corn*
γιγνώσκω	(*g*)*nōsco*	*know, can, ken, uncouth*
γλύφω	*glūbo*	*cleave* (O.E. *cleōfan*)
γόμφος (‘bolt’)		*comb* (O.E. *camb*)
γόνυ, γνύξ, γωνία	*genu*	*knee* (O.E. *cneō*)
γράφω		*carve* (O.E. *ceorfan*)
ἔργον (for *ϝέργον*), *ὄργανον*		*work* (O.E. *weorc*)
ζεύγ-νυμι (for *γευγ-*), *ζυγόν*	*iungo, iugum, iumentum*	*yoke*
μέγας, μείζων (for *μέγγων*)	*magis, maximus*	*mickle, much* (O.E. *mycel*)
οἴγω, οἴγ-νυμι (for *ὀ-ϝίγνυμι*[2])		*wicket* (from Scand. *vīkja* ‘to turn,’ through O.Fr.)[3]
ὀ-ρέγω, ὀ-ρεκτός[2]	*rego, rectus*	*reach, rake, right*
	sūgo	*suck*
ὑγιής	*uegeo, uegetus, uigil*	*wake*
φώγω		*bake*

---

[1] The rough breathing is probably due to a change from *u* to *yu* in primitive Greek (for *y*(i̯) becoming *h* in Greek, see p. 180); the *s* in Latin is all that remained of *ex*, cf. *ἐξύπερθε*; Sanskrit *upári*.

[2] See p. 188.

[3] Cf. Mod. Fr. *guichet* and O.E. wican ‘to give way.’

d.

GREEK	LATIN	ENGLISH
ἀ-μαλδύνω ('destroy')	*mollis* (for *ml̥dwis*)	*melt*, *malt*
δάκνω (for *δῆ̥κ-νω*), *δάκος*, *δῆγμα* (Attic)		*tongs* (O.E. *tange*)
δάκρυ, *δάκρῡμα*	*lacrima* (*l* for *d*, p. 174)	*tear* (Goth. *tagr*$^{\mathrm{v}}$)
δαμνάω, *δμητός* (Attic)	*domo*, *dominus*	*tame*
δατέομαι		*ted* ('to spread mown grass'), *tad* (dial. 'manure')$^{\mathrm{v}}$ (Scand.)
δέκα (for *δέκm̥*)	*decem*	*ten* (cf. Goth. *taihun*)
δέμω, *δόμος*	*domus*	*timber*[1]
δένδρον, *δένδρεον* (for *δέν-δρεϜον*), *δρῦς*		*tree* (O.E. *treō*)
δέρω, *δέρμα*, *δόρυ*		*tear* ('rend')
δῖος (for *δίϜ-yος*), *Διός* (for *ΔιϜ-ός*), *Ζεύς* (for *Δyηύ-ς*), *Ζῆν* (for *Δyῆ*[*w*]-*μ*)[2]	*Iūpiter* (*Dyéu-pater*, voc.), *Ioui* (*Dyĕw-i* from *Dyēw-i*), *diem* (*dyē*[w]-*m*)[2]	*Tues-day* (O.E. *Tīwes-dæg*)
δύναμαι, *δύναμις*	*bonus* (for *dwenos*)[3]	*town*
ἔδομαι	*edo*	*eat*
ἕδος, *ἕδρα*, *ἕζομαι* (for *σέδ-yομαι*)	*sedeo*, *sella* (for *sed-la*), *sēdes*	*sit*, *set*, *settle*; *seat* (Scand.)
καρδία	*cordis*	*heart*
κλαδαρός ('frail')	*claudus*	*halt* ('lame')
	claudo (for *sclaudo*)	*slot* (Dutch, 'bolt')
μέλδω ('melt')		*smelt* (Scand.)
οἶδα (*Ϝοῖδα*), (*Ϝ*)*ἰδεῖν*	*uideo*	*wot*, *wit*, *wise*
ὀ-δόντος (p. 188)	*dentis*	*tooth* (cf. Goth. *tunþus*)
σμερδαλέος	*mordeo*, *morbus* (for *smordwos*[3])	*smart*
ὕδωρ, *ὕδρος* ('water-snake')	*unda*	*water*, *wet*, *otter*

---

[1] For the inserted *b*, cf. *thunder* and Germ. *Donner*, Lat. *tono*.

[2] Greek shows the Weak Grade *diw-* as well as the High Grade *dyēw-* or *dyĕw-*; *ēw-* in Aryan became *ē-* before *-m*; for the changes of *dy-* see pp. 182—3.

[3] For *b* representing *dw*, *du*, cf. *bellum* and *duellum*, *bis* and *δίς*.

b. [There are comparatively few examples of the history of this sound in these three languages.]

GREEK	LATIN	ENGLISH
βαίτη ('sheepskin coat')		*pea-jacket* (Dutch, cf. Goth. *paida*)
	labium, *lambo*	*lip*, *lap*
	labo ('totter')	*sleep*
	lubricus	*slip*, *slippery*
κυβ-ιστάω ('tumble')		*hop*
κύβος		*heap*
στέμβω ('shake')		*stamp* ^{III}
	trabs	*thorp* (Scand.)

……

g^h. [For the development of *g*^{h}, *d*^{h}, and *b*^{h} in Latin according to position, see p. 175.]

ἀγαθός (Hesychius *ἀκαθός*, i.e. *ἀχαθός*^{G})		*good*
ἄγχω, *ἄγχι*	*ango*, *angor*, *angustus*	*anger* (Scand.)
θυγάτηρ (for *θυχάτηρ*)^{G}		*daughter*
κάχληξ ('pebble')		*hail* (O.E. *hagol*)
κιγχ-άνω (for *χιγχάνω*)^{G}		*go* (O.E. *gān* for *gangan*, Scot. *gang*)
χαίρω (for *χύργω*), *χαρά*	*hortor*	*yearn* (O.E. *gȳrnan*)
χά-σκω, *χάος*	*hio*, *hi-sco*	*yawn* (O.E. *gānian*)
χείρ, *χερός*, *εὐχερής*	*hir* (O. Lat.)	
χειμών, *χειμερινός*, *δύσ-χιμος*, *χίμαρος*	*hiemis*, *hībernus*[1], *bīmus* (for *bi-hīmus*)	*gimmer* (dial. 'lamb that has lived one winter')
χθές (for *χγές*), *χθιζός* (for *χγəσδγός*)	*herī* (for *hesī*), *hesternus*	*yester-day* (O.E. *geostra*)

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[1] For *heímrinos*; cf. (*Ϝ*)*ἐαρινός*, *uērnus* (for *uḗrinos*).

GREEK	LATIN	ENGLISH
χλόη (*χλόϝη*), *χλοερός*	*heluus* ('yellow'), *holus*	*yellow*, *yolk* (O.E. *geolu*, *geoleca*), *gold*
	hostis	*guest* (Scand.)
d^h.		
ἄεθλον (*ἄ-ϝεθλον*[1])	*uadis*	*wed*
ἄμαθος (for *σάμəθος*)		*sand* (for *samd*)
ἄνθραξ (for *σένθραξ*)[G]		*cinder*[2] (O.E. *sinder*)
ἠΐθεος (*ἠ-ϝίθεϝος*)	*uiduus*, *dī-uido*	*widow*
θάνατος (for *θϝάνατος*), *θνῄσκω*		*dwindle* (O.E. *dwīnan*)
θαρσέω		*durst*, *dare*
θέναρ		*den*
θρῶναξ (Lac.)		*drone* (O.E. *drān*)
θυγάτηρ		*daughter*
θῡμός	*fūmus*	*dust* (cf. Germ. *Dunst*, 'vapour')
θύρα	*fores*, *forum*, *forus*	*door*
θύω	*suf-fio* ('fumigate')	
μέθυ, *μέθη*		*mead*
σπάθη		*spade*[III]
τί-θημι[G], *θήκη*	*facio*, *fēci*	*do*
b^h.		
ἀλφός ('leprosy'), *ἄλφιτον*	*albus*[3]	(O.E. *elfetu*, 'swan')
	libet	*love* (O.E. *lufu*)
ἐρέφω, *ὄροφος*		*rafter*
	flo, *flātus*, *flāmen*	*blow* (O.E. *blāwan*), *blast*, *bladder*
	flōs	*blossom*; *bloom* (Scand.)

---

[1] See p. 188.

[2] Misspelling due to Fr. *cendre* = Latin *cinis*.

[3] Cf. *Albion* (Gaulish).

GREEK	LATIN	ENGLISH
	far	*barley*
	fermentum	*barm*
ὀφρύς		*brow*
πῆχυς^{G}		*bough*, *bow* (of a ship)
πυθμήν (for *φυθμήν*)^{G}	*fundus*, *funditus*	*bottom* (cf. Germ. *Boden*)
φάραγξ	*frango*	*break*
φηγός (Attic, 'oak')	*fāgus* ('beech')	*beech*, *book*, *buck-wheat*
φημί, *φήμη* (Attic), *φωνή*, *φάτις*	*fāri*, *fāma*, *fateor*, *facies*	*ban*, *banns*
φορκός ('white')		*birch*, *Her-bert*, *Bertha*
φρῡ́νη ('toad')		*brown*
φῡ́ρω	*ferueo*, *defrutum*	*brew*, *broth*
φύω, *φύσις*, *φῡλή*	*fui*, *futurus*, *da-bam*	*be*, *bower*, *neigh-bour*
φώγω		*bake*

CHAPTER IX.

SOUNDS WHICH HAVE DEVELOPED DIFFERENTLY IN GREEK AND LATIN[1].

Greek *-τι-* —Latin *l* for *d*—Aspirated Stops—The Velars—(i) Unlabialised—(ii) Labialised—*s*—*sw-* —*sy-* —Initial *y*—Final *m*—*i̯* and *u̯*—*n̥* and *m̥*—*l̥* and *r̥*—*The Vowels*—Contraction—Metathesis of Quantity—Attic *η*—Prothesis—Conclusion.

WE have seen in discussing Grimm's Law that the six Aryan Stops, *k, t, p*; *g, d, b*, remain the same in Greek and Latin. The chief exceptions are:—

(1) in Greek, *-τι-* (in the middle of a word) before another vowel becomes *-σι-*; e.g. *πλούσιος* beside *πλοῦτος*. Cf. French *station*.

(2) in a few Latin words we find *l* for *d*; this is possibly a dialectic change. Cf. *δάκρυ*, *lacrima*; *odor*, *oleo*; *sedeo*, *solium*; *δᾱ(ϝ)ήρ*, *lēuir*[2]; *mālus* for *mazdos*, Eng. *mast*; *mīles* for *mizdes*, Gk. *μισθός*, Eng. *meed* (cf. *soldier* from *solidus*, a coin); and the early loan-word *lanista* from *δανειστής*.

Aspirated Stops.

With regard to the Aspirated Stops, g^h, d^h, b^h:—

(1) g^h becomes *χ* in Greek and in Latin *h* initially[3] and (generally) *g* medially[4]; e.g. *χεῖμα*, *hiemis*; *χῆρος*, *hēres*; *ἀχηνία*, *egēnus*; *ἠχή* (*ϝᾱχᾱ́*), *uāgītus*.

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[1] This chapter does not of course pretend to be exhaustive.

[2] *lēuir* for *lēuer* by Popular Etymology from *uir*.

[3] Before *r* it became *f*; cf. *χόνδρος* below.

[4] Under certain circumstances *h* or lost altogether, e.g. *ὄχος* (for *ϝόχος*) and *ueho*, *maior* (for *mahyor*).

(2) d^h becomes *θ* in Greek, and in Latin *f* initially, and with a few exceptions *d* medially[1]; e.g. *θύρα, fores*; *ἠΐθεος* (*ἠ-ϝίθεϝος*), *uiduus*.

(3) b^h becomes *φ* in Greek, and in Latin *f* initially and *b* medially; e.g. *φέρω, ferō*; *ἄμφω, ambō*.

The following are additional examples:—

g^h	χαμαί	*humus, homo*[2]	*bride-groom*[2]
	χόνδ-ρος ('groats,' for χρόνθρος)^{G}	*frendeo*	*grind*
	χορδή	*hīra, hīlla* (for *hīr-la*), *haru-spex*	*yarn* (O.E. *gearn*)
	φεύγω (for φεύχω)^{G}, φυγή	*fūgi, fugio, fuga*	*bow* (O.E. *būgan*)
d^h	θηλή, θῆλυς	*fēlis, fēlix, fīlius*[3], *fēmina, fētus*	
	θιγεῖν, θιγγάνω	*fīgo*	
	θραύω (for θραύ-σω)	*frūstum*	
	πείθω (for φείθω)^{G}, πέποιθα, πιθεῖν	*fīdus, fīdo, foedus, fides*	*bidding-prayer*[4], *bead, beadsman*
	οὖθαρ	*ūber*	*udder*
b^h	φλύω ('to bubble')	*fluo, fluuius, flūmen*	
	φύλλον (for φύλγον)	*folium*	*blade*
	ἀφρός (for m̥φρός)	*imber* (for *m̥ber*)	
	νέφος, νεφέλη	*nebula, nūbes, nūbo*	
	ὀμφαλός	*umbilīcus, umbo*	*navel* (O.E. *nafela*) ?

Velar Stops.

There remain the Velar Stops. These apparently had two forms, Labialised and Unlabialised, i.e. with or without a slight *w*(u̯)-sound following them. They are distinguished thus:

Breathed	q		q^w	
Voiced	g	g^h	g^w	g^{wh}.

---

[1] Before and after *r* it becomes *b*;—*ἐρυθρός, rubrum, red*; *uerbum, word.*

[2] 'Son of the soil'; *-groom* for *-goom*, O.E. *guma* 'man.'

[3] The *ī* instead of *ē* is perhaps due to the *i* in the next syllable.

[4] O.E. *biddan* 'to pray'; *bid* 'to command' is a different word.

(i) The *Unlabialised* Velar Stops q, g, and g^h are practically indistinguishable in Greek, Latin, and English from k, g, and g^h[1].

They may be exemplified thus:—

q	καρπός	*carpo*	*harvest* (O.E. *hærfest*)
	κολωνός	*collis* (for *col-nis*), *celsus*, *culmen*	*hill*, *holm*
	κρέας (κρέϜας)	*crūdus*, *cruor*	*raw* (O.E. *hreāw*)
	ἀγκών, ὄγκος ('barb')	*ancus* ('bent-armed'), *uncus*	*angle* ('to fish')
g	γέρανος	*grūs*	*crane*
	γλοιός, γλίσχρος	*glūten* (*ū* for *oi*)	*clay*
	στιγμή, στίζω	*in-stīgo*	*stick* ('stab'), *stitch* $^{\text{III}}$
	στέγω, τέγω	*tego*, *toga*	*thatch* (cf. Scot. *thack*)
g^h	χανδάνω	*pre-hendo*	*forget*; *get* (Scand.)
	ὀ-μίχλη[2]	*mingo*	*mist* (cf. Goth. *maihstus*)
	στείχω		*stair*, *stile* (O. E. *stæger*, *stigel*) $^{\text{III}}$
	[before Liquids]	*glaber* (*b* for d^h)	*glad*

(ii) The changes of the *Labialised* Velar Stops are too complicated to be given in detail here, the forms they assume in the various languages differing widely according to the adjacent sounds. Certain laws, however, may be gathered from the following examples, e.g.:—

(1) q^w before *o* in Greek becomes π, and before ι and ε, τ.

(2) g^w generally becomes β in Greek and consonantal *u*(w) in Latin.

It should be noted that these laws hold good *entirely* in Attic alone; cf. Ionic κότερος, κῇ for πότερος, πῇ; Aeolic πίς and Thessalian κίς for τίς; and Aeolic πέμπε for πέντε.

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[1] Included in this chapter for convenience.

[2] See p. 188.

q^w	*ποδ-απός* (for *ποδ-n̥q^wós*, cf. Lat. *prop-inquus*)	*quod*	*what* (O.E. *hwæt*)
	ἕπομαι (for *σέπομαι*)	*sequor*	*see*(cf.Goth.*saihwan*)[1]
	ὄμμα (for *ὄπ-μα*), *ὄπωπα*	*oc-ulus*	*eye* (O.E. *eāge*)
	τίς	*quis*	
	πέντε	*quinque* (for *penque*)[2]	*five*[2] (cf. Germ. *fünf*)
	πέσσω (for *πέκyω*), *ἔπεψα*, *πεπτός*	*coquo* (for *quequo*)[3]	(Germ. *kochen*)[4]
	κύκλος		*wheel* (O. E. *hweōl*, *hweowol*)
g^w	*βοῦς*	*bōs* (Oscan for true Latin *uōs*)[5]	*cow*
	βορά, *βρωτήρ*, *βάραθρον*	*uoro*	
	βαίνω (for *βάνyω*)[6]	*uenio*[6]	*come*(cf.Goth.*qiman*)
	ἀμείβω	*mīgro* (*gr* for $g^w r$)	
	βαρύς	*grauis*	
	διερός ('nimble,' *δ* for g^w)	*uireo*	
	δελφύς, *ἀδελφός*, *δέλφαξ*	*uulua* (by assimilation for *uolba*)[7]	*calf*
g^{wh}	*θερμός*,*θέρος*(*θ* for g^{wh})	*formus*	*warm*
	θείνω (for *θένyω*), *φόνος*	*de-fendo*	
	ἐ-λαχύς[8] (*χ* for g^{wh})	*leuis*	*light* (adjective)
	βάλανος (*β* for g^{wh})	*glans*	
	νεφρός (*φ* for g^{wh})	*nebrundines* (dial.)	*kid-ney* (for *kidnere*)[9]
	νίφα (for *σνίφm̥*)	*nix*, *niuem*, *ninguit*	*snow*

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[1] 'to follow with the eyes.'

[2] See footnote to p. 168.

[3] By assimilation for *pequo*, cf. *quinque*, p. 168; *popīna* is borrowed from Oscan or Umbrian.

[4] Eng. *cook* is borrowed from Latin.

[5] Cf. *βίος*, *uīuus*, Osc. *bīuus* (Nom. Plur.).

[6] For g^w*m̥-yō*, p. 185.

[7] For the assimilation, cf. *bubīle* for *buuīle*. *Galba* (Gaulish = 'Fat-paunch,' Suet. *Galb.*, 3) is probably identical.

[8] See p. 188.

[9] *Kid* is for *quith* = 'belly.'

It is interesting to note that the consonant in Greek changes *in the same word* according to circumstances:

Cf. ποδ-απός and τίς (cf. *quod* and *quis*),
πόλος and τέλλω,
περιπλομένων and περιτελλομένων.

Similarly, but for Analogy, we should have λείπω, λείτεις, λείτει, λείπομεν, λείτετε, λείπουσι (λείπω is for λείq^{w}ω, cf. *re-līquit*, *re-liquus*).

s.

Among the remaining consonants that have developed differently in Greek and Latin, the most important are the Spirants *s* and *y* and the Nasal *m*.

Broadly speaking, *s* remains unchanged in Greek and Latin except that—

(i) in Greek, initial *s* becomes *h* (rough breathing)[1], e.g.:—

ἅλς	*sal*	*salt*
ἅμα, ὁμός	*semel*	*same*
αὐθ-έντης	*sontis*	*sin* (cf. Germ. *Sünde*)
ἑλίκη	*salix*	*sallow* (the tree)
ἕλκω	*sulco*	Devonshire *zool*, 'plough' (O.E. *sulh*)
ἵημι (for σί-σημι)	*sēmen*	*sow*, *seed*
μέλδω		*smelt* (Scand.)
ἑρμηνεύς	*sermo*	
ἡμέρα		*summer*
ὗς	*sūs*	*sow*

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[1] Lost altogether before consonants (e.g. νίφα, *snow*; ῥέω, *stream*, pp. 49, 156) except in the combinations σκ-, στ-, σπ- and sometimes σμ-, e.g. σκοπέω, στατός, σπονδή, σμικρός or μικρός.

and (ii) *s* between vowels is lost in Greek[1], and becomes *r* in Latin; e.g.:—

ἕως[2] (Dor. ἆως for ἆϜως, ᾱὔσως)	*Aurōra* (for *Ausōsa*)	*east*
γένους (γένεος for γένεσος)	*generis* (for *geneses*)	*kin*
νυός (for νυσός)	*nurus* (for *nusus*)	
ἰός (Ϝῑός for Ϝισός)	*uīrus* (for *uīsus*)	
μυός (for μυσός)	*mūris* (for *mūses*)	*mouse*
ὦα (for ὦσα)	*ōra* (for *ōsa*)	

Contrast also ζέ-ω, ζεσ-τός; *ūr-o, us-tus.*

There are a few apparent exceptions in Greek, e.g. μέσος; but this stands for μέθyος, cf. Hom. μέσσος, Lat. *medius*, Eng. *mid.* (The *s* between vowels in such words as ἔλυσα was preserved or restored on the analogy of words like ἔκοψα where the verb-stem ended with a consonant.) Some exceptions in Latin, e.g. *miser*, *caesaries*, are due to the following *r*; compounds like *praesideo* were influenced by the simple word (*sedeo*).

With regard to *s* in conjunction with other consonants it should be noticed that in Greek, σ disappeared medially—with 'compensation' where possible—(1) before ν and λ (e.g. φαεινός for φαϜεσ-νός; θραυλός for θραυσ-λός, cf. θραυσ-τός)[3], and (2) after ν and μ (e.g. ἔφηνα for ἔφαν-σα, ἔνειμα for ἔνεμ-σα). Latin dropped *s* before *n*, *m*, and *l*—with compensatory lengthening medially—(e.g. *niuem*, *snow*; *dīnumero*; *mordeo*, *smart*; *dīmoueo*; *lubricus*, *slippery*; *dīluo*), changed *rs* medially to *rr* (e.g. *terra*, τέρ-

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[1] In one Greek dialect it becomes *r* as in Latin; Eretrian inscriptions show such forms as παραβαίνωριν for παραβαίνωσιν.

[2] The rough breathing is transferred to the beginning from the end of the first syllable, where it was the intermediate stage between *s* and nil.

[3] δύσνοος, δύσλυτος, and similar words were felt to be compounds, and remained unchanged.

σομαι, cf. Att. *θάρρος* for *θάρσος*), and gave *nīdus, sīdo* for *nisdus*[1], *sisdo*[2]. Cf. also *differo, dīiudico, trāno.*

sw-, *sy-*.

It should be noticed that the rough breathing in Greek represents, besides Aryan *s*, Aryan *sw-* (*sy̯-*) and *sy-* (*si̯-*), e.g.:—

ἡδύς (for *σwāδύς*)	*suāuis* (for *suādwis*)	*sweet*
ἱδρώς (for *σwιδρώς*)	*sūdor* (for *suoidor*)	*sweat*
ὑμήν ('membrane,' for *σyῡμήν*)	*suo*	*sew*

In Latin, *swe-* became *so-*, e.g.:—

ὕπνος (Weak Grade)	*soror* (for *suesor*)	(Germ. *Schwester*)[3]
	sopor, *somnus* (for *suep-*)	(O.E. *swefn*, 'a dream')
	in-solens	*swell*
	sorbus ('service-tree,' *b* for d^h)	*sword* (cf. Germ. *Schwert*)

y.

Aryan *y* at the beginning of a word appears in Greek as *ζ*[4]. In Aryan, *y* seems to have differed initially from consonant *i* (*i̯*, see below), cf. *you* and *ὑμεῖς*, not *ζυμεῖς*. Perhaps *y* was breathed (*ch* in German *ich*), and *i̯* voiced (*y* in *you*). For Aryan *y* initially, cf.:—

ζυγόν	*iugum*	*yoke*
ζέω (for *ζέσω*), *ζεστός*		*yeast*
ζύμη ('yeast')	*iūs* ('broth')	

Final *m*.

Final *m* in Greek becomes *n*; in Latin it generally remained only as a nasalisation of the preceding vowel (see p. 53), e.g.:—

τόν	*is-tum*	
τάων (Epic, for *tāsōm*)	*is-tārum*	
ἄροτρον	*arātrum*	

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[1] Cf. Eng. *nest*.

[2] Identical with *ἵζω*, see p. 154.

[3] In English, Scand. *systir* has ousted O.E. *sweostor*.

[4] For its pronunciation see p. 47 and footnote.

i̯ and u̯.

In discussing the formation of Diphthongs in Chapter II. we noticed that some vowels may lose their syllable-forming power, and in fact be used as consonants. The two vowels *i* and *u* were so used in Aryan, and in this capacity are generally written by philologists i̯ and u̯. Previously in this book the symbols *y* and *w* have been used[1], as more familiar. The apparent distinction between i̯ and *y* in Aryan (see above) now makes it necessary to adopt the symbols more generally used by philologists, i̯ and u̯. But it should be borne in mind that in Latin there was but one sound for *i* used as a consonant, viz. *y* in English *yard*, and but one for *u* used as a consonant, viz. *w* in English *wit* (or more accurately *ou* in French *ouest*), while in Greek, at any rate in Attic of the 4th century, *ι* and *υ* were always true vowels (see p. 50). (When preceded by a vowel, i̯ and u̯ form diphthongs in the narrow sense, e.g. *ai̯*, *ou̯*, whose development in Greek and Latin will be noticed shortly.)

(i) When followed by a vowel (in the same syllable) the changes of i̯ are these:—

	GREEK	LATIN
Initially	*h*	i (*j*)
Medially	(lost)	(lost)

The changes of u̯ in the same circumstances do not vary:—

Ϝ (or lost)[2]	u (*v*)

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[1] Except in the case of diphthongs, e.g. *ai̯*, *ou̯*, not *ay*, *ow*; this is to avoid confusion with ordinary English spelling.

[2] Always lost in Attic.

These changes may be exemplified thus:—

i̯	*ἧπαρ* (*π* for *$q^{u̯}$*)	*iecur*	
	ὑάκ-ινθος (for *i̯υϝή̥κ-*)	*iuuencus*	*young*
	ὥρα, *ὧρος* (for *i̯ωρ-*)	*hornus* ('this year's,' for *ho-i̯ōrinos*)[1]	*year*, *yore*

Cf. also—	*τιμῶ*[2]	for	*τιμά-i̯ω*	*amo*	for	*amā-i̯ō*
	φιλῶ[2]	for	*φιλέ-i̯ω*	*moneo*	for	*monē-i̯ō*
	δηλῶ[2]	for	*δηλό-i̯ω*	*finio*	for	*fini-i̯ō*
				statuo	for	*statu-i̯ō*

u̯	*ϝόχος*, *ὄχος*	*ueho*	*wain* (O.E. *wægn*)
	ὄϝις, *ὄϊς*	*ouis*	*ewe*
	ἔλυτρον ('reservoir')	*uoluo* (for *ueluo*)[3]	*wallow*
	ἔτος	*uitulus*[4]	*wether*[4]
	ἰτέα	*uītis*, *uīmen*	*withy*
	ἐσθής	*uestis*	*wear*(cf. Goth. *wasjan*)
	αἰών	*aeuum*	*aye* ('always,' O.E. *ā* for *āwa*)
	νέος	*nouus* (for *neu̯os*)[5]	*new*

(ii) The changes of i̯ when preceded by a consonant should be mentioned. In Greek the most important are—

(1) the *-σσ-* or *-ττ-* resulting from *τi̯-*, *κi̯-*, or *χi̯-*, when medial, e.g.:—

λίσσομαι	for	λίτi̯ομαι, cf. λιτή
ὄσσε	for	ὄκi̯ε (*oq$^{u̯}$i̯e*), cf. *oculus*
ἐλάσσων	for	ἐλάχi̯ων, cf. ἐλαχύς[6],

and (2) the ζ- resulting from γi̯- and δi̯-, e.g.:—

ἁρπάζω	for	ἁρπάγi̯ω, cf. ἅρπαγος
ἐλπίζω	for	ἐλπίδi̯ω, cf. ἐλπίδος.

For the pronunciation of *-σσ-* and *-ζ-* see page 47.

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[1] *ho-*, 'this'; cf. *hoc*.

[2] Another view is that these are later formations on the analogy of *φέρω*, etc. (where the *ω*-form is original), ousting *τίμᾱμι*, etc., in most dialects; if this is so, the i̯ was never there.

[3] For Latin *ol* for *el* cf. *olīuum* borrowed from *ἔλαιϝον*.

[4] Originally 'yearling.'

[5] For Latin *ou* for *eu̯* cf. Old Latin *touos* (*tuus*) and Hom. *τέος* (*τέϝος*).

[6] Initially the corresponding sound is *σ*; cf. *σ̣εῦε* and *δορυσσόος*, p. 156.

It should also be noted that when *i̯* is lost after *ν* and *ρ* there is 'compensation' in the preceding syllable, e.g.:—

φαίνω	for	*φάνι̯ω*, cf. *ἐφάνην*
πλῡ́νω	for	*πλῡ́νι̯ω*, cf. *πλέ(ϝ)ω*[1]
μοῖρα	for	*μόρι̯α*, cf. *μόρα*, *μέρος*
φθείρω	for	*φθέρι̯ω*, cf. *φθορά*, *ἐφθάρην*,

and -λι̯- becomes -λλ-, e.g. *ἄλλος* for *ἄλι̯ος*, Latin *alius*. Cf. also *ἀλήθεια* for *ἀλήθεσι̯α*.

In Latin, *di̯* initially becomes *i* (*j*), e.g.:—

Iouis for Old Latin *Diouis* (cf. *Ζεύς* for *Δι̯ηύς* = Latin *diūs*[2])
Iānus for Old Latin *Diānus* (cf. *Diāna*, which preserved its ancient form).

With regard to *u̯* it should be added that—

(1) in Greek, when *u̯* was lost before *ρ*, the *ρ* was doubled medially, e.g. *(ϝ)ρήγνυμι*, *ἐρράγην*,

(2) *τu̯* in Greek became initially *σ* and medially *σσ*(*ττ*), e.g. *σε* for *τϝε* (cf. Dor. *τύ*, Lat. *tu*), *τέτταρες* for q^{u}*έτϝαρες*;

(3) in Latin *du̯* became *b*, e.g. *bis* for *du̯is* = *δίς* (but *duo* two syllables), *bellum* for *du̯ellum*[3] (as in Old Latin), *morbus* for *mordu̯us* (cf. *mordeo*)[4].

In Chapter II. (p. 32) we explained that certain consonants could form syllables like vowels, and were then included with vowels under the name of Sonants. Some of these sonant consonants, as their development is different in Greek and Latin, must be dealt with here.

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[1] πλῠ- is the Weak Grade corresponding to πλεϝ- or πλευ-.

[2] In the phrase *nudius tertius* (*nu*='now,' Gk. *νυ*); cf. also Plaut. *noctuque et diu*; the accusative *diem*=Ζῆν (for Δι̯ῆμ), and from this the nominative *diēs* came by analogy. See also p. 170.

[3] Connected with *duo*.

[4] The *u* instead of *b* in *suāuis* (for *suādu̯is*, cf. ἡδύς, *sweet*) is probably due to the preceding *u̯*.

n̥ and m̥.

(i) The Sonant Nasals n̥ and m̥ develop on parallel lines as follows:—

		GREEK	LATIN
Before i̯	n̥	*αν*	en
Before Sonants	n̥	*αν*	en
Otherwise	n̥	*α*	en

		GREEK	LATIN
Before i̯	m̥	*αν*	en
Before Sonants	m̥	*αμ*	em
Otherwise	m̥	*α*	em

These changes may be exemplified thus[1]:

n̥	*μαίνομαι* (*μάνι̯ομαι* for *μν̥́ι̯ομαι*)		
	τανύ-γλωσσος (for *τν̥ύ-*)	*tenuis*	*thin*
	ὀνό-ματα (for *-μν̥τα*)[2]	*cogno-menta*	
	ἄτερ (for *σν̥́τερ*)		*sunder* [v]
	ἐλάτη (for *ἐλν̥́τη*)	*linter*	*linden* [v]
	δασύς (for *δν̥σύς*)	*densus*	
	κατά	*contra*[3]	
	ἀ-δάματος	*in-domitus* (for *en-*)	*un-tamed*

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[1] In Latin *en*, *em*, have in certain positions undergone further change.

[2] With Greek *α* for original (n̥), cf. Bavarian *könna* for Standard German *können* (könn̥).

[3] These represent other stages of the Ablaut, see Chapter VII.

[v] by Verner's Law (see p. 165).

m̥	βαίνω (βάνι̯ω for g^{w}ḿ̥i̯ō)	*uenio*	*come*
	ἅμα (for σm̥a) ἁ-πλόος	*semel*, *sim-plex*	*same*
	ἀφρός	*imber* (for *ember*, cf. *simplex* above)	
	πόδα	*pedem*	[*foot*]
	δέκα	*decem*	*ten* (cf. Goth. *taíhun*)

Cf. also such forms as τετάχαται for τέταχ-νται (cf. λέλυ-νται), ἐλοίατο for ἕλοιντο. Additional examples will be found under Vowel Gradation, pp. 153 ff.

l̥ and r̥. The Sonant Liquids l̥ and r̥ also need illustration:

	GREEK	LATIN
l̥	αλ, λα	ol (ul)
r̥	αρ, ρα	or (ur)

The alternative forms in Greek are probably connected with original accentuation. Latin, under most circumstances, had changed *ol* to *ul* by the Augustan period (see pp. 104 ff.). In certain positions (e.g. *ol* before *l*) the older form survived. By Stress-weakening (see p. 41) original *ŏr* became *ur*, but only when final (*-or* in words like *lepor*, *honor* represents *-ōs*, see p. 141; in *moneor*, *regor*, it was originally *-ōr*). The following examples will illustrate the above scheme:—

l̥	ἀλέω (for m̥λει̯ω)	*molo* (for *melo*)[1]	*meal*
	βάλλω (for βl̥i̯ω)	[Cf. βέλος, βολή[1]]	
	ἕλκω[1], ὁλκός[1]	*sulcus* (for *sl̥cos*)	*zool* (p. 178)
	ἔσταλμαι (for ἔστl̥μαι)	[Cf. στέλλω, στολή[1]]	

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[1] These represent other stages of the Ablaut, see Chapter VII.

l̥ (continued)

	καλύπτω	*oc-cultus*	*hole*
	μαλακός	*mulceo*	
	παλτός	*pulsus* (for *pl̥tos*)[1]	
	φλέγω[2], *φλόγα*[2]	*fulgeo* (for *fl̥geo*)	
	ἀ-μαλδύνω (for *ἀ-μλ̥δύνι̯ω*)	*mollis* (for *ml̥du̯is*)	*melt*, *malt*
	τάλας, *τέτλαθι*	*tollo* (for *tl̥no*)	*thole* ('to endure')
	ἐκλάπην (for *ἐκλ̥πην*)	[Cf. *κλέπτω*, *κλοπή*[2]]	
r̥	*ἐφθάρην* (for *ἐφθρ̥́ην*)	[Cf. *φθείρω*, *φθορά*[2]]	
	καρδία	*cordis*	*heart*
	φέρω[2]	*fors* (for *fr̥ts*)	*birth*
	τάρφος, *ἐτράφην* (for *θρ̥́φος*, *ἐθρ̥́φην*)[G]	[Cf. *τρέφω*, *τροφή*[2]]	
	κέρας	*cornu*, *ceruus*[2]	*horn*, *hart*
	μορτός[2], *βροτός* (for *μρατός*)[3]	*mors* (for *mr̥ts*)	*murder*, *murther* (O.E. *morðor*)
	πράσον (for *πρ̥́σον*)	*porrum* (for *pr̥som*)	
	ῥαπίς (for *Ϝρ̥πίς*)	[Cf. *ῥέπω*, *ῥοπή*[2]]	

Additional examples will be found under Vowel Gradation, pp. 153 ff.

The Vowels.

Broadly speaking, the Aryan Vowels remain unchanged in Greek and Latin. In Latin, however, the strong Stress-accent which prevailed in early times had the effect of 'weakening' the vowels of unstressed syllables (see Chapter III.). The details of this vowel-weakening are too complicated to be dealt with here. The following examples must suffice:

δόμος	but	*dómus*
τό (for *τόδ*)	but	*ís-tud*
ἕπεο	but	*sequere* (for *séqueso*)
λεγόμενοι	but	*légiminī*
ǽestimo	but	*éxistimo*
ágo	but	*súbigo.*

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[1] See p. 160 footnote 2.

[2] These represent other stages of the Ablaut, see Chapter VII.

[G] by Grassmann's Law (see p. 164).

[3] See p. 159 footnote.

There were also some vowel changes in Latin, e.g. *ol* to *ul* (see above, p. 185), *oi* to *ū*, which are due to other causes.

The older Latin forms often occur in Inscriptions (see pp. 104 ff.), e.g.:—

aidilis (*aedes*, *αἶθος*)	later	*aedilis*
moiros	later	*mūrus* (cf. *οἶνος*[1], *ūnus*)
feido (*πείθω*^{G})	later	*fīdo*,

and such forms as *fugāī* corresponding to *φύγᾳ* (*φύγᾱι*) are found in the literature of the early Classical period. It should be noted that *eu̯*, which is preserved in Greek, has disappeared[2] in Latin, being represented by *ū*, e.g.:—

εὔω (for *eu̯sō*), *ūrō* (for *ūsō*).

In the case of the Neutral or Indeterminate Vowel (ə) in Aryan, in both Greek and Latin it was at first identified with *a*, but was afterwards affected in Latin by the Stress-accent like other vowels.

Contraction.
Metathesis.
Attic *η*.
Prothesis.

The original vowel is often obscured in both languages by Contraction, e.g. *τιμῶ* for *τιμάι̯ω*, *amō* for *amāi̯o*. Of two long vowels which cannot contract, the first both in Greek and Latin tends to become short, e.g. *ἕως* for *ἠώς* (from *ᾱὔσως*), *νεῶν* for *νηϝῶν* (cf. *nāuis*), *plĕō* for *plēō* (cf. *plēnus*).

The Metathesis (or Exchange) of Quantity seen in *βασιλέως* for *βασιλῆος* is peculiar to Ionic and Attic Greek.

Of Compensatory Lengthening of vowels in both languages examples will be found above, pp. 179, 183.

It should be mentioned that Attic changed *ᾱ* to *η*, except (1) after *ρ*[3], (2) after another vowel; e.g. *μήτηρ*, Doric *μᾱ́τηρ*, Latin *māter*; *φηγός*, Doric *φᾱγός*, Latin *fāgus*; *φρᾱ́τηρ*, *frāter*; *πρᾶγμα*; *χώρᾱ*; *ἰᾱτρός*; *καρδίᾱ*; *γενεᾱ́*.

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[1] 'ace.' [2] *neu* for *nĕu̯e* is a 'spurious' diphthong, see p. 55.

[3] *κόρη* is for *κόρϝᾱ*, Ionic *κούρη* (with compensation).

A word should be added as to the Greek phenomenon of Prothesis. Certain words in Greek are found to have developed a short vowel before the initial consonant. The cause of this is doubtful. In some cases it may have been difficulty of pronunciation (cf. French *esprit* from Latin *spiritus*). It occurs invariably before ρ where it represents original *r* and not *sr* or *wr*, and the quality of the added vowel seems to have been determined, or at any rate affected, by the neighbouring sounds. The most usual prothetic vowels are α and ε (e.g. ἀνεψιός, *neptis*; ἀμέλγω, *mulgeo*; ἐρυθρός, *ruber*; ἐλαχύς, *leuis*); but ο and ι also occur (e.g. ὀδόντος, *dentis*; ἴκτις, κτιδέη).

Conclusion.

We have now spoken of Language in general and the Study of Language; we have discussed the formation, classification, and representation of Sounds; we have touched on the 'family history' of Greek, Latin, and English; and have dealt with the causes of Change, and its phenomena in the Classical languages. To go further and discuss Words in their Combinations, their inflexions and uses in the individual languages—what, for instance, is the connexion between τρέμουσι and *tremunt*, ναυτῶν and *nautarum*, or why we find Genitive Absolute in Greek and Ablative Absolute in Latin—this is beyond the scope of this book. The remaining chapter might for many reasons have been placed at the beginning. But it was inevitable that the student should find in an account of the history of the subject technicalities which only a perusal of the rest of the book could explain to him. In an elementary work of this nature, to have mixed up the history of the subject with the exposition of it would have been a still greater mistake. It has therefore been thought best to give it as an appendix.

CHAPTER X.

SKETCH OF THE HISTORY OF COMPARATIVE PHILOLOGY.

Names—Popular Etymology—Beginnings of Etymology—Early Etymology unscientific—Plato's *Cratylus*—Beginnings of Grammar—Aristotle—The Study of Language in the Alexandrian Age—'Analogy' and 'Anomaly'—The Parts of Speech—Dionysius Thrax—τύπτω—Pergamene School—The Stoics—Crates of Mallus—The Study of Language in Italy—Varro—Terminology of Latin Grammar—Probus—Gellius—After the Middle Ages—The Scaligers—Voss—Discovery of Sanskrit—Bopp—Jacob Grimm—Pott—Curtius—Schleicher—Fick—Max Müller—New School—Verner—Grassmann—Whitney—Leskien—Principles of the New School—Paul—Brugmann—Delbrück's *Comparative Syntax*—Bréal's *Sémantique*.

Names.

At a very early stage in his development man doubtless began to take an interest in the meaning of names. When names are first given they are self-explanatory. An epithet signifying an attribute of the person, some physical peculiarity of his or circumstance connected with him, is one day applied to him to distinguish him from other people, and then by imitation becomes permanent. A name is an epithet crystallised. The Roman names *Quintus* and *Strabo*, and the English *Baker* and *Sheepshanks*, are familiar examples. But as time goes on, the special characteristics which the names originally implied are forgotten. The names descend from father to son and, as words, become no longer applicable; or the language to which they once belonged as living nouns or adjectives pursues its path of development and leaves them mere labels, unintelligible as words and useful only 'for purposes of reference.' Thus *Edmund* once meant 'eloquent,' and *Woodward* was a trade-name meaning 'wood-keeper.'

Popular Etymology.

The phenomena of Popular Etymology (see p. 130) prove that man prefers a self-explanatory name to a mere label. The same habit of mind which results in the giving of a self-explanatory name or nickname, causes him to see meanings of his own in names whose original meaning is lost to him, and he will often without knowing it make changes in a name to make it mean something to him.

Beginnings of Etymology.

Now the difference, as we have said, between a name and an epithet is a matter of permanence. We may observe the intermediate stage in the stock-epithet,—*the briny deep*, *the green grass*, *οἴνοπα πόντον*, *pius Aeneas*. As a rule, these epithets are not so unintelligible (apart from the person or thing to which they are applied) as an ordinary name is. But the tendency to employ them irrespective of the context marks the beginning of the crystallising process. It is only to be expected, therefore, that in a race which has reached the early stage marked by the desire of making its names mean something, there should be some minds impelled to go further and inquire into the meaning of adjectives and common nouns and finally of words in general. This is the beginning of the science of Etymology.

In its early history, however, Etymology can hardly claim to be called a science. The foundation of science is classification, the discovery of common characteristics. It is not enough for the botanist to collect specimens; he must classify them according to some system and observe the regularity which underlies their apparent diversity. Before it can deserve the name of a science, Etymology must proceed by some method, and this for a long time it failed to do. Any superficial resemblance was enough to establish a derivation, particularly when that derivation was needed in support of some historical statement or philosophical theory. How far Plato's etymologies in the *Cratylus*, such as ἄνθρωπος from ὁ ἀναθρῶν ἃ ὄπωπεν, are to be taken seriously, is not clear. It is generally held that most of them are parodies of the etymological speculations of the time. It is with Plato, however, that the study of language first begins to develop in a new direction, that of Grammar. In speculation on the origin of language—the theme of his *Cratylus*—he was preceded by Antisthenes and to some extent by Heracleitus and Democritus, if not by Pythagoras himself. But in his works are found the earliest traces of the classification of words into what we call 'parts of speech.' For instance, he distinguishes Subject (ὄνομα) and Predicate (ῥῆμα) and recognises the distinction between Active and Passive. In Aristotle we find the grammatical system further elaborated. He is the first to distinguish the Cases (πτώσεις, a word which he also uses for 'Tenses').

Early Etymology unscientific.

Plato's *Cratylus*.

Beginnings of Grammar.

Aristotle.

In the Alexandrian age of erudition Grammar came to be investigated first with a view to elucidating the earlier literature and afterwards as a study in itself.

The Study of Language in the Alexandrian age.

'Analogy' and 'Anomaly.'

The Parts of Speech.

Dionysius Thrax. *τύπτω.*

Plato and Aristotle had regarded the study of language merely as subordinate to dialectic. This was now changed. Zenodotus, the first great critic, compiled an Homeric Glossary; Callimachus wrote on the different names given to the same thing in different nations; Eratosthenes in his work on the Old Comedy dealt with the Attic dialect. Aristophanes of Byzantium not only compiled the first great lexicographical work, in which he traced every word with which he dealt to its original meaning, but also probably wrote a work on 'Analogy' or regularity in grammar, as contrasted with 'Anomaly' or irregularity, in which he drew attention to the rules of inflexion rather than the exceptions. The adherents of these two principles, Analogy and Anomaly, waged a long and bitter war, which continued till the second century A.D. The greatest advance in the study of language in the Alexandrian Period was the definite recognition by Aristarchus of eight parts of speech,—Noun (*ὄνομα*, including Adjectives), Verb (*ῥῆμα*), Participle (*μετοχή*), Pronoun (*ἀντωνυμία*), Article (*ἄρθρον*), Adverb (*ἐπίρρημα*), Preposition (*πρόθεσις*), and Conjunction (*σύνδεσμος*). One of his pupils was Dionysius Thrax, the author of the earliest Greek Grammar, a book which remained the standard work on the subject for at least thirteen centuries, and is still extant. In it is found our old friend *τύπτω*; but the complete (and largely fictitious) paradigm of this unfortunate model is not found fully developed till 400 A.D.[1] A grammarian of the school of Dionysius, Tyrannion the younger, who lived at Rome in the time of Cicero, wrote upon the connexion between the Greek and Latin languages. A contemporary, Didymus Chalcenterus, dealt with names corrupted by change of spelling, and a treatise on letter-changes by Tryphon, who flourished under Augustus, has survived in an abridged form.

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[1] There is an edition by Uhlig, Leipzig, 1883; English Translation by T. Davidson, 1874.

The Pergamene School.

The Stoics.

Meanwhile Alexandria's literary rival, Pergamum, had been the scene of the labours of the Stoic, Crates of Mallus. The Stoics had long studied grammar and etymology, though only as subsidiary to dialectic. Chrysippus had maintained the cause of 'anomaly' against the adherents of 'analogy,' and Crates continued the struggle. "Crates appears to have regarded all the trouble spent on determining the laws of declension and conjugation as idle and superfluous, and preferred simply to accept the phenomena of language as the arbitrary results of custom and usage[1]." Like modern philologists he seems to have dealt with language as it is, not as it ought to be; but he underestimated the value of investigation into the regularities of grammar. The visit of Crates to Rome about the year 160 did much to establish Greek learning among the Romans.

Crates of Mallus.

The Study of Language in Italy.

At this point we turn to Italy. Ennius, who died shortly before the visit of Crates, and whose greatest service to posterity was the introduction of the hexameter into Latin, is said to have taken an interest in grammar and spelling. In the next generation the playwright Accius appears to have made some study of orthography (see p. 79). A younger contemporary of his, Stilo, a man of profound learning in both Greek and Latin literature as well as a great antiquarian, devoted much of his energy to Grammar and Etymology. But the earliest existing Latin work on these subjects is the extant portion of

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[1] Sandys, *Hist. of Classical Scholarship*, p. 155.

Varro.

Varro's treatise *de Lingua Latina*, which was published before 43 B.C. This treatise, when entire, dealt with etymology, inflexion, analogy and anomaly, and syntax. Varro also wrote upon the origin of the Latin language. The chief value of his extant works for us lies in his quotations from Latin poets whose works have perished. The next name is that of Julius Caesar, who wrote a treatise on grammar in two books, (1) on the alphabet and words, and (2) on irregularities in nouns and verbs. Cicero in his *Orator* attempts etymologies such as *capsis* from *cape si uis*, and discusses the pronunciation of *ignoti*, *ignaui* as *innoti*, *innaui* and similar questions, but with him such things are mere side-issues of the study of rhetoric.

Terminology of Latin Grammar.

To the terminology of Latin Grammar, which is the basis of modern grammatical terminology, contributions were made by various writers from Varro to Quintilian. Thus Varro spoke of the *casus accusandi*, but called the genitive *casus patricus.* The Ablative is said to have been so named by Caesar. The Declensions were first distinguished by Palaemon the teacher of Quintilian. The foremost grammarian of the first century

Probus.

was Probus, to whom two extant grammatical treatises are ascribed. He shares with Palaemon the honour of establishing the main outlines of the traditional Latin Grammar. In the next

Gellius.

century the greatest Roman name is that of Aulus Gellius, whose *Noctes Atticae* is largely concerned with Latin lexicography. He discusses such questions as the pronunciation of H and V, and whether we should say *curam uestri* or *curam uestrum*. Among Greek authors, the greatest grammarian of this period is Apollonius Dyscolus, the father of Greek Syntax. He is the only ancient grammarian who wrote an independent work on this great branch of grammar. This work is extant, and is remarkable for its scientific treatment of the subject[1].

After the Middle Ages.

The Scaligers.

Voss.

It is beyond the scope of this book to trace the history of the study of language through the later centuries of the Empire and the Middle Ages. Among many writers, both Greek and Roman, who dealt with this subject, we have noticed a considerable number who wrote on Etymology, and we have seen that there are in ancient literature certain traces of the Comparative Study of Language. But no real advance took place in these departments till quite recent times. Even in the 17th century J. Caesar Scaliger in his treatise *de Causis Linguae Latinae*, bold attempt though it is at independent investigation, shows by such derivations as *pulcher* from πολύχειρ and *ordo* from ὅρον δῶ that he is still groping far from the light. Joseph Scaliger's *Coniectanea ad Varronem* and Voss's *Etymologicum Linguae Latinae* and *Tractatus de Litterarum Permutatione* display some slight advance; but despite the labours of many scholars the era of Modern Comparative Philology cannot be said to begin till the end of the 18th century.

Discovery of Sanskrit.

Hitherto Latin had been thought to be derived from a dialect of Greek, or Greek and Latin to be cousins both descended from Hebrew. The first step towards the discovery of their true connexion was made in 1786. In that year the oriental scholar Sir William Jones, who was judge of the High Court at Calcutta from 1783 to 1794, introduced the ancient Sanskrit language to European scholars, and by his conception of a great family of languages in which Greek, Latin, and Sanskrit stood side by side became the founder of Modern Comparative Philology. It was thirty years, however, before this great idea was formulated as a valid scientific theory. In 1816 Franz Bopp published his *System of the Conjugations in Sanskrit in Comparison with those of Greek, Latin, Persian, and German.* This is the first work in which Sir William Jones's idea is supported by a detailed and systematic comparison of the languages. In 1833 Bopp brought out his *Comparative Grammar of Sanskrit, Greek, Latin, Lithuanian, Old Slavonic, Gothic, and German.* The object of this work was to give a description of the original grammatical structure of the languages, to trace their phonetic laws, and to investigate the origin of their grammatical forms. Of these three points Bopp considered the third the most important.

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[1] Edited by Schneider and Uhlig, 1878.

Bopp.

Meanwhile the Germanic languages were being investigated, among others by Jacob Grimm. Instead of devoting himself, like Bopp, to grammatical forms, Grimm set himself to study the development of sounds, at the same time confining his researches to a narrower field. Though he made use of Bopp's results published in 1816, there is little doubt that his system was mainly worked out before he knew them. The result of his philological labours was his *German Grammar,* published between 1819 and 1822. In this work he promulgated the law which is known by his name, the Law of the Permutation of Consonants in the Germanic Languages (see p. 162). It is true that

Jacob Grimm.

the principles embodied in this law had been partly discovered before him by the Danish scholar Rask, but the honour of enuntiating them fully and scientifically rests with Grimm.

Pott.

The next great name is that of F. A. Pott, whose *Etymological Investigations* appeared between 1833 and 1836. This work, which shows the influence of Grimm, is remarkable as the first really scientific book of derivations.

Curtius.

Scholars now began to 'specialise' in the different branches of Aryan philology. Sanskrit, Zend, Slavonic, Lithuanian, and Celtic, each found its investigator. Georg Curtius laboured at Greek; Corssen, Mommsen, and others at the Italic languages. In 1858, in his *Principles of Greek Etymology,* Curtius compared the Greek words with their equivalents in Sanskrit, Zend, Latin, Germanic, Letto-Slavonic, and Celtic, and discussed the sounds and the sound-changes fully and systematically.

Schleicher.

In 1861 the history of Comparative Philology begins a new chapter. In that year August Schleicher published his *Compendium of the Comparative Grammar of the Indo-Germanic Languages.* An enormous mass of detail had now been collected by the investigators of the various languages. Schleicher dealt with this as a whole. He assumed for the first time the prehistoric mother-speech of the Aryan Languages, and established a series of laws governing the development of their sounds. He was a follower of Darwin, and all his work is coloured by Darwin's great theory. His attempt to reduce the phenomena of language to conformity with the principles of natural science was not successful, but his premature death in 1868 was a great

Fick.

Max Müller.

loss to the cause of Comparative Philology. Schleicher's endeavours to reconstruct the Aryan language were continued by August Fick, the first edition of whose *Comparative Dictionary of the Indo-Germanic Languages* was published between 1870 and 1872. In the meantime Max Müller's *Lectures on the Science of Language* (1861—1864) had made the results of the scientific investigation accessible to the English public.

New School.

Verner.

Grassmann.

Between 1870 and 1879 discoveries were made which entirely upset the old theory of the original vowels. It had been supposed that the three simple vowels of Sanskrit and Gothic, *a*, *i*, and *u*, were the only vowels in the original language. The labours of Johannes Schmidt, Osthoff, Ascoli, and particularly Brugmann, proved that this was a mistake. Meanwhile the apparent exceptions to Grimm's Law were removed by further discoveries. In 1875 the Danish scholar, Karl Verner, showed that many of the exceptions were due to accentuation in the original language (see p. 165). Others were removed by H. Grassmann's discovery affecting syllables both beginning and ending with an aspirate in Sanskrit and Greek (see p. 164).

Whitney.

Leskien.

Principles of the New School.

These discoveries belong to the New School. In 1867 Professor Whitney in his *Language and the Study of Language* had given a great impulse to the study of the workings of Analogy. In 1878 Professor Leskien of Leipzig and his pupils and adherents, Karl Brugmann, H. Osthoff, H. Paul, and others, formulated the two great principles of the New School:

(1) that the laws of Phonetic Change admit of no exception,

(2) that apparent exceptions are produced by Analogy.

The Old School looked upon analogical change with some contempt, as deviating from the laws of phonetic change. The name '*False* Analogy' is a reflexion of this. The Old School in busying itself with such problems as the origin of speech had begun at the wrong end. The New School studied living languages, and the forces which shape and modify them, and argued from them backwards to the dead languages and the history of language in general. For some years a fierce controversy raged between the two schools, but in 1885 with the death of Curtius the Old School ceased to exist. The views of the New School were laid down at greater length by Professor H. Paul in his *Principles of the History of Language*, a work of the greatest value to every student of the subject. But the greatest name in the New School is without doubt that of Karl Brugmann. In his great work *The Elements of the Comparative Grammar of the Indo-Germanic Languages*, published in 1886, he gives a history of the eleven most important languages of the family[1]. This work was supplemented between 1893 and 1897 by Berthold Delbrück's *Comparative Syntax of the Indo-Germanic Languages*. The latter is the result of labours in a new field. Hitherto the forms of words had been studied to the neglect of their functions. This reproach is now being wiped off not only as regards Comparative Syntax but

Paul.
Brugmann.

Delbrück's *Comparative Syntax*.

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[1] He has recently (1904) published a *Short Comparative Grammar*, to which I am much indebted throughout this book.

also as regards another branch of Comparative Philology, Semantics or Semasiology. This science is concerned with tracing the development of the meanings of words. It is still in its infancy. The foremost name in connexion with it is that of Professor Michel Bréal of the Collège de France, whose *Essai de Sémantique*, published in 1897, laid the foundation of the study.

Bréal's *Sémantique*.

LIST OF BOOKS USEFUL TO THE STUDENT OF COMPARATIVE PHILOLOGY.

[Nearly all foreign books in the following list either are to be had in English translations or from their nature do not require translation. For fuller bibliographies the reader is referred to Sonnenschein's *Best Books* and *Reader's Guide.*]

General Works:

Bréal.	*Semantics* (trans.), 1900.
Brugmann[1].	*Elements of the Comparative Grammar of the Indo-Germanic Languages* (trans.), 1888—1895, and its continuation—
Delbrück.	*Vergleichende Syntax der Indogermanischen Sprachen*, 1893—1900 (not yet translated).
Giles.	*Manual of Comparative Philology*, 1901.
Lubbock (Lord Avebury).	*The Origin of Civilisation*, 1902.
Sandys.	*History of Classical Scholarship*, 1903.
Sayce.	*Introduction to the Science of Language*, 1880.
„	*Principles of Comparative Philology*, 1875.
Strong, Logeman, and Wheeler.	*Introduction to the Study of the History of Language*, 1891.
Strong.	(Adapted from Paul's *Principien*) *Principles of the History of Language*, 1888.
Sweet.	*History of Language* (Dent's Primers), 1901.
Taylor, I.	*Origin of the Aryans*, 1892.
Tylor.	*Anthropology*, 1881.

Phonetics:

Behnke.	*Mechanism of the Human Voice*, 1880.
Rippmann.	(Adapted from Vietor), *Elements of Phonetics* (Dent's Modern Language Series), 1899.
Sweet.	*Primer of Phonetics*, 1902.

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[1] His *Short Comparative Grammar* (1904), to which I am much indebted, is not yet translated into English.

The Alphabet:

Clodd. *Story of the Alphabet* (Newnes' Story Series).
Egbert. *Introduction to the Study of Latin Inscriptions*, 1896.
Hicks and Hill. *Manual of Greek Historical Inscriptions*, 1901.
Lindsay. *Handbook of Latin Inscriptions*, 1897.
Roberts, E. S. *Introduction to Greek Epigraphy*, Part I, 1887.
Part II, Roberts and Gardner, *Inscriptions of Attica*, 1904.
Thompson, E. M. *Handbook of Greek and Latin Palaeography*, 1894.
Whibley. *Companion to Greek Studies*, 1905.
Encyclopædia Britannica, Supplement, Article 'Writing.'

Greek:

Jannaris. *Historical Greek Grammar*, 1897.
Prellwitz. *Etymologisches Wörterbuch der Griechischen Sprache*, 1892.
Purton. (Translated from Blass) *Pronunciation of Classical Greek*, 1890.
Smyth, H. W. *Sounds and Inflexions of the Greek Dialects; Ionic*, 1894.
Whibley. *Companion to Greek Studies*, 1905.

Latin:

Bréal and Bailly. *Dictionnaire Etymologique Latin*, 1885.
Lindsay. *The Latin Language*, 1894.
„ *Short Historical Latin Grammar*, 1895.

English:

Bradley. *The Making of English*, 1904.
Emerson, O. F. *Brief History of the English Language*, 1896.
Greenough and Kittredge. *Words and their Ways in English Speech*, 1902.
Jespersen. *The English Language*, 1905.
Kluge and Lutz. *English Etymology* (Glossary), 1899.
New English Dictionary, 1884—
Skeat. *Concise Etymological Dictionary of the English Language*, 1901.
Sweet. *History of English Sounds*, 1888.
„ *New English Grammar*, Part I, 1900.
Toller. *Outlines of the History of the English Language*, 1900.

French:

Darmesteter. *Historical French Grammar*.

INDEX OF THE PHONETIC SYMBOLS USED IN THIS BOOK[1].

[Phonetic spelling is indicated by round brackets. Special symbols have not been assigned to such Latin and Greek sounds as differed only slightly from the corresponding English sounds. The differences are pointed out on pp. 47 sqq.]

(a)	First element of the diphthong in *how* (hau̯); in many dialects of English the *a* in *pat* is so pronounced, approximating to the *u* (ɐ) in *butt* in Standard English.
(ā)	*a* in *father*.
(ɐ)	*u* in *butt*, *o* in *come*, and first element of the diphthong in *high* (hɐi̯).
(æ)	*a* in *man*.
(bʰ)	*bh* in *abhor* (approximately).
(ɔ)	*aw* in *law*.
(dʰ)	*dh* in *adhere* (approximately).
(đ)	*th* in *then*.
(e)	(1) *e* in *men*, and first element of the diphthong in *say* (sei̯). (2) First element of the diphthong in *fair* (feə).
(ə)	The 'Indeterminate Vowel,' employed in many unaccented syllables in English, e.g. the first and last syllables of *together* (təgéđə); second element of the diphthong in *fair* (feə).
(ə̄)	The long form of the above, heard in *sir* (sə̄), *earth* (ə̄þ).
(gʰ)	*gh* in *leg-hit* (approximately).
(g) (gʰ)	(see page 26).

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[1] Certain obvious symbols such as *b*, *f*, *k*, have been omitted, as well as others which occur only in the Tables in Chapter II.

(i)	*i* in *bit*, and first element of the diphthong in *fear* (fiə).
(ī)	First element of the diphthong in *see* (sīi̯).
(i̯)	Second element of the diphthongs in *say* (sei̯), *see* (sīi̯), *high* (hɐi̯), and *boy* (boi̯) (see also p. 181).
($\mathrm{k^h}$)	*kh* in *ink-horn* (approximately).
(l̥)	*le* in *table* (tei̯bl̥).
(m̥)	*m* in *Yes'm*, *am* in *madam*, *om* in *kingdom*.
(n̥)	*en* in *seven*, *on* in season.
(ŋ)	*ng* in *sing*, and *n* in *sink*.
(ŋ̥)	*'n* in *You c'n go* (yūw kŋ̥ gōu̯).
($^{\text{ŋ}}$)	In this position, (ŋ) represents the nasalisation of the preceding vowel, e.g. ($\mathrm{o}^{\text{ŋ}}$)=*on* in French *son*.
(o)	*o* in *not*, and first element of the diphthong in *boy* (boi̯).
(ō)	First element of the diphthong in *so* (sōu̯).
($\mathrm{p^h}$)	*ph* in *top-hat* (approximately).
(q)	*q* in *queen*, *c* in *caught*.
(r̥)	(see page 33).
(ṣ)	*sh* in *fish*.
($\mathrm{t^h}$)	*th* in *at-home* (approximately).
(u)	*u* in *put*, *oo* in *foot*.
(ū)	*u* in *cruel*.
(u̯)	Second element of the diphthongs in *how* (hau̯), *so* (sōu̯); (see also page 181).
(x)	*ch* in Scotch *loch* and in German *ach*.
(z)	*z* in *zeal*, *s* in *raise*.
(ẓ)	*z* in *azure*, *ge* in *rouge*.
(z̥)	*as* in *As big as Dick* (z̥ big z̥ dik).
(χ)	*ch* in German *ich*.
(þ)	*th* in *thin*.

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